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May 4, 2006

Mr. John Carrigan MADEP NERO 205B Lowell Street Wilmington, MA 01887

Subject: FINAL Report on Field Sampling and Analysis Efforts for the Crow Lane Landfill, Newburyport, MA

Dear Mr. Carrigan,

As outlined in our 3/2/06 Proposal for Landfill Gas and Ambient Air Sampling, Crow Lane Landfill, Newburyport, Massachusetts, ENSR provides this final report for work conducted in Task 1: Collection of Landfill Gas/Ambient Air Samples for Laboratory Analysis.

SUMMARY OF SAMPLE COLLECTION

Field Measurements. Per our proposal, the following field measurements were collected and are summarized in attached Tables 1 and 2.

Concentrations of O_2 , CO_2 , methane (including LEL) and H_2S from all extraction wells, ambient air sampling locations and the flare inlet (to be performed using a Land-tec multi-gas landfill gas meter). The results of these measurements are summarized in Table 1. It is noted that MiniRAE colorimetric tubes were used to measure hydrogen sulfide, with the exception of gas well EW-3 and all ambient readings; well EW-3 was measured with the LandTec Meter (Serial GM08015/05) while the ambient samples were collected with the Jerome Meter (Serial 631-2313) .

The vacuum at each extraction well and the flare inlet was measured. The results of these measurements are summarized in Table 2. It is noted that flow could not be measured in the wellheads as there was an obstruction at the sampling port preventing insertion of the pitot tube to a sufficient location to permit measurements. The pitot tube measurement near the flare inlet was measured at 0.01" water column (w.c.). Attached to this letter please find a calculation sheet showing that this measurement correlates to a gas flow of approximately 23 scfm (+/- 30%). It is further noted that 2 of the 8 extraction wells (TEW-1 and EW-6) were throttled down so that no vacuum was actually being applied to the well. Five of the remaining 6 wells were throttled down so as to have allowed less than 1" w.c. applied to the well. The remaining well was under a 1.5" w.c. vacuum. The line pressure at the flare and on the manifold side of the throttle valve was approximately 25" w.c. vacuum with the exception of TEW-2 which had a line pressure of 2" w.c. due to liquids blocking the pipe.

Meteorological data at each ambient air sampling location, at the top of the landfill and near the flare (including wind speed/direction, air temperature, barometric pressure and turbulence) was collected. Data are summarized in sheets attached to this letter report.

General field observations (including odors, sampling conditions, etc.) were collected into a field notebook. A copy of the hand-written notes are provided as an attachment to this letter report.

Ambient Air Samples. Per our proposal, ambient air samples were collected according to the following procedures.

The landfill was surveyed prior to establishing ambient air sampling locations. Based on both measurements and olfactory observation, two locations where hydrogen sulfide odors were detected were selected for collection of ambient air samples. AMB-1 was collected on the southwest side of the landfill on the access road as marked on Figure 1. The hydrogen sulfide readings ranged from 3-50 parts per billion (ppb) at this location. AMB-2 was collected 20' southeast of flare also marked on Figure 1. The hydrogen sulfide readings ranged from 3 to 81 ppb at this location. Referenced hydrogen sulfide readings were obtained using the Jerome Meter. As noted on field data collection sheets attached to this letter report, there was a light swirling wind which influenced the detection of the hydrogen sulfide odors both by olfactory detection and instrument measurement. ENSR collected grab samples for sulfur gases (according to EPA Method 15 using GC/FPD) for both ambient air sample locations. A Tedlar bag of approximately 12 liters in capacity was filled by evacuating a rigid air-tight container used to hold the bags. The background ambient air sample (AMB-3) was collected approximately ½ mile north of the landfill in a retail parking lot (Blockbusters Video). There was very limited traffic observed at the time of sampling. No hydrogen sulfide was measured on the Jerome Meter at the background location.

In addition to the Tedlar bag samples for sulfide analysis, grab samples using SUMMA canisters were collected for volatile organic compound (VOC) analysis (according to EPA Method TO-15 using GC/MS) at each ambient location. An instantaneous grab sample drawn through a charcoal tube and Hopalite tube, respectively, were used for collection of ambient samples for analysis of arsine (according to NIOSH 6001) and mercury vapor (according to NIOSH 6009).

All samples were transported to ENSR's Air Toxics Laboratory in Harvard, MA; all samples were analyzed in Harvard with the exception of the arsine and mercury vapor samples which were sent to Adirondack Environmental Services, Inc., located in Albany, New York.

Raw Landfill Gas Samples. Per our proposal, raw landfill gas samples were collected according to the following procedures.

Extraction well EW-1 (located on the eastern side of the landfill), temporary extraction well TEW-2 (located on the western side of the landfill); and influent gas at the flare (located on the southeastern portion of the landfill) were sampled for sulfides, VOCs, arsine and mercury vapor according to procedures outlined above for the ambient air samples. Field observations for raw landfill gas samples that differed from ambient samples include: 1) MiniRAE colorimetric tubes identified hydrogen sulfide concentrations in the 0.1-0.2% range; therefore, laboratory analyses will include dilution of the samples; and 2) arsine and mercury vapor samples collected from the EW-1 and TEW-2 locations contained moisture which may affect analysis. It is noted that results obtained with colorimetric tubes may underestimate the hydrogen sulfide concentration because the hand pump used in sample collection may not be sufficient to overcome the vacuum applied to the system.

SUMMARY OF ANALYTICAL METHODOLOGIES

VOCs - EPA Method TO-15 using GC/MS. ENSR collected grab samples using SUMMA canisters for both the raw landfill gas samples and the ambient air samples. In utilizing the TO-15 analysis, each sample was analyzed for a standard list of 64 volatile organic compounds. Compounds not identified and quantified in the standard TO-15 analysis were identified as Tentatively Identified Compounds (TICs). A library search of each unidentified peak's spectrum was conducted using the most current NIST mass spectral database. ENSR's chemists reviewed the library searches and tentatively identify each unknown peak and identified; TICs were only identified for the in-line landfill gas samples. In addition to the identification of the unknown peaks, an estimated concentration was calculated for each unknown peak. These estimated concentrations

may vary from the true concentrations by several orders of magnitude, depending on the true response factor value. The samples were analyzed by ENSR's Air Toxic Specialty Laboratory.

Sulfur Gases – EPA Method 15 using GC/FPD. As with the VOC collection methodology, ENSR collected grab samples for both the raw landfill gas samples and the ambient air samples. The analysis included H₂S, sulfides, mercaptans and thiols. Sulfur dioxide was also be included as part of the analyses. The samples were analyzed by ENSR's Air Toxic Specialty Laboratory. The samples were analyzed by the laboratory in the order from the least to the highest hydrogen sulfide concentration based on field screening data.

Arsine (NIOSH 6001) and Mercury Vapor (NIOSH 6009). The arsine and mercury samples consisted of an instantaneous grab sample drawn through a charcoal tube and Hopalite tube, respectively. The samples were analyzed by Adirondack Environmental Services, Inc., located in Albany, New York.

RESULTS

The VOC results are presented in Table 3 and 4. Table 3 indicates the detected VOCs for each sample. There were 26 VOCs detected overall. Well EW-1 had 20 VOCs detected with the highest measured concentration being toluene at 2,700 parts per billion by volume (ppbV). Well TEW-2 had 21 VOCs detected with the highest measured concentration being 1700 ppbV acetone. The inlet to the flare had 21 VOCs detected with the highest measured concentration being 2,500 ppbV toluene. None of the ambient samples contained VOCs above the analytical detection limit. Table 4 indicates the detected TICs for each sample. There were 23 TIC VOC detected overall. Well EW-1 had 10 TICs detected with the highest measured concentration being alpha pinene at 2,000 ppbV. Well TEW-2 also had 10 TICs detected with the highest measured concentration being methyl cyclohexane at 2,100 ppbV. The inlet to the flare had also had 10 TICs detected with the highest measured concentration being alpha pinene at 1,000 ppbV. None of the ambient or background samples contained any TICs.

The sulfur gas results are presented in Table 5. All in-line samples contained hydrogen sulfide and carbonyl sulfide/sulfur dioxide. The concentrations hydrogen sulfide ranged from 8,500,000 ppbV in well EW-1 to 41,000,000 in the inlet to the flare. The concentrations of carbonyl sulfide/sulfur dioxide ranged from 840,000/1,600,000 ppbV in well EW-1 to 3,500,000/4,900,000 ppbV in the inlet to the flare. None of the ambient air samples analyzed produced readings above the method detection limit. There was a significant discrepancy in the hydrogen sulfide field screening and analytical results collected from the extraction wells. In ENSR's opinion, the inability of the field measurement pump to overcome the effect of the vacuum in the extraction wells resulted in an under reporting of the hydrogen sulfide field screening results.

The arsine and mercury vapor results were all non-detected relative to method detection limits as well. Copies of all laboratory results are attached to this letter report.

ENSR provides this final report with noted attachments for your review and consideration. Please feel free to contact the undersigned with any questions.

Sincerely yours,

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Table 1 CO₂, H₂S, LEL(CH₄), O₂ Data Crow Lane Landfill Newburyport, MA March 8, 2006

Location	CO ₂ %	H₂S %	CH ₄ %	O ₂ %
EW-1	27.4	0.06	19.2	7.4
TEW-1	46.5	0.49	28.2	3.2
TEW-2	46.4	0.17	44.8	0.6
EW-6	46	0.25	25.6	1.7
EW-5	32.5	0.19	26.7	5.1
EW-4	32	0.12	31.2	4.9
EW-3	21.9	0.0128	25.7	10.1
EW-2	35	0.26	22.2	4
Flare	27.2	0.1	20	9.3
Ambient 1	0	0.003 - 0.050	0	21
Ambient 2	0	0.003 - 0.081	0	20.9
Ambient 3	0	0	0	20.6



Table 2 Flow and Vacuum Data Crow Lane Landfill Newburyport, MA March 8, 2006

Well	Vacuum at	Vacuum on Header	Pitot Tube Head
	(inch WC)	(inch WC)	(inch)
TEW-2	1 – 1.5	1 – 2	Obstruction in pipe
TEW-1	0	10 – 20	Obstruction in pipe
EW-6	0	No port for header	Obstruction in pipe
EW-5	0.7	25	Obstruction in pipe
EW-4	0.1	25	Obstruction in pipe
EW-3	0.23	25	Obstruction in pipe
EW-2	0.6	25	Obstruction in pipe
EW-1	0.5	25	Obstruction in pipe
Flow at flare	N/A	25"	0.01



Table 3 Detected Volatile Organic Compounds (VOCs) Crow Lane Landfill Newburyport, MA March 9, 2006

Sample ID	Well	EW-1	Well 1	EW-2	Inlet	Inlet Flare		B-1	AMB-2		Background	
Compound	ppbV	μg/m3	ppbV	μg/m³	ppbV	μg/m³	ppbV	μg/m³	ppbV	μg/m³	ppbV	μg/m³
chloromethane	10 U	21 U	10 U		11	23	0.5 U	1.0 U	0.5 U		0.5 U	
chloroethane	10 U	26 U	10 U	26 U	42	110	0.5 U	1.3 U	0.5 U	1.3 U	0.5 U	1.3 U
acetone	2500 E	6000 E	1700 E	4000 E	20 U	48 U	1.0 U	2.4 U	1.0 U	2.4 U	1.0 U	2.4 U
trichlorofluoromethane	330	1900	53	300	1700 E	9700 E	0.5 U	2.8 U	0.5 U	2.8 U	0.5 U	2.8 U
3-chloropropene	10 U	31 U	19	59	10 U	31 U	0.5 U	1.6 U	0.5 U	1.6 U	0.5 U	1.6 U
2-butanone (MEK)	24	71	10 U	29 U	130	370	0.5 U	1.5 U	0.5 U	1.5 U	0.5 U	1.5 U
n-hexane	10 U	35 U	1200 E	4100 E	10 U	35 U	0.5 U	1.8 U	0.5 U	1.8 U	0.5 U	1.8 U
tetrahydrofuran	10 U	29 U	10 U	29 U	44	130	0.5 U	1.5 U	0.5 U	1.5 U	0.5 U	1.5 U
benzene	64	210	180	580	190	620	0.5 U	1.6 U	0.5 U	1.6 U	0.5 U	1.6 U
cyclohexane	300	1000	420	1400	440	1500	0.5 U	1.7 U	0.5 U	1.7 U	0.5 U	1.7 U
2,2,4-trimethylpentane	65	310	200	940	130	610	0.5 U	2.3 U	0.5 U	2.3 U	0.5 U	2.3 U
n-heptane	1200 E	4900 E	1500 E	6000 E	1800 E	7500 E	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U
trichloroethene	36	200	32	170	58	310	0.5 U	2.7 U	0.5 U	2.7 U	0.5 U	2.7 U
MIBK	79	330	83	340	210	850	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U
1,1,2-trichloroethane	10 U	55 U	23	120	10 U	55 U	0.5 U	2.7 U	0.5 U	2.7 U	0.5 U	2.7 U
toluene	2700 E	10000 E	1400 E	5300 E	2500 E	9300 E	0.5 U	1.9 U	0.5 U	1.9 U	0.5 U	1.9 U
tetrachloroethene	360	200	31	210	58	390	0.5 U	3.4 U	0.5 U	3.4 U	0.5 U	3.4 U
chlorobenzene	70	320	230	1000	140	660	0.5 U	2.3 U	0.5 U	2.3 U	0.5 U	2.3 U
ethylbenzene	770	3300	360	1600	880	3800	0.5 U	2.2 U	0.5 U	2.2 U	0.5 U	2.2 U
p & m-xylene	840	3600	440	1900	1100	4900	1.0 U	4.3 U	1.0 U	4.3 U	1.0 U	4.3 U
styrene	31	130	10 U	43 U	10 U	43 U	0.5 U	2.1 U	0.5 U	2.1 U	0.5 U	2.1 U
o-xylene	290	1300	120	530	290	1300	0.5 U	2.2 U	0.5 U	2.2 U	0.5 U	2.2 U
4-ethyl toluene	110	510	42	200	92	450	0.5 U	2.5 U	0.5 U	2.5 U	0.5 U	2.5 U
1,3,5-trimethylbenzene	92	450	74	360	90	440	0.5 U	2.5 U	0.5 U	2.5 U	0.5 U	2.5 U
1,2,4-trimethylbenzene	180	890	73	360	230	1100	0.5 U	2.5 U	0.5 U	2.5 U	0.5 U	2.5 U
1,4-dichlorobenzene	14	85	30	180	27	170	0.5 U	3.0 U	0.5 U	3.0 U	0.5 U	3.0 U

U - Not Detected

E - Estimated, Value exceeded upper range of calibration

ppbV - parts per billion by volume

μg/m ³ - micrograms per cubic meter



Table 4 Tentatively Identified Compounds Crow Lane Landfill Newburyport, MA March 9, 2006

Sample ID	MW	W	ell EW	-1	W	ell TEV	I-2	In	let Fla	re		AMB-1	*		AMB-2	*	Ва	ckgrou	nd*
Compound		RT (min)	Est. ppbV	Est. µg/m3															
unknown		12.87	170																
methyl cyclohexane	98.1876	22.17	130	522	21.48		8433	22.12	300	1205									
unknown C ₈ H ₁₆ hydrocarbon					24.20	350		24.50	160										
unknown		25.22	190																
1,1,3-triethylbenzene	126.24				26.67	320	1652												
3-methyl octane	128.26				27.31	400	2098	27.36	180	944									
unknown					27.83	370													
unknown								27.88	170										
unknown C ₉ H ₁₈ hydrocarbon		27.88	130																
n-nonane	128.26	28.06	300	1574				28.04	210	1102									
unknown					28.35	300													
unknown C ₉ H ₁₈ hydrocarbon		28.39	130					28.38	160										
unknown					28.69	510													
2,6-dimethyl octane	142.28				28.90	920	5354	28.90	220	1280									
propyl cyclohexane	126.24	28.92	120	620				28.92	200	1033									
alpha pinene	136.23	29.07	2000	11144				29.05	1000	5572									
unknown					29.64	290													
beta pinene	136.23	30.01	200	1114															
1,2,3-trimethylbenzene	120.19				30.12	310	1524												
decane	142.28	30.27	190	1106															
unknown aliphatic hydrocarbon								30.26	170										

U - Not Detected

E - Estimated concentration, value is above the upper limit of calibration.

NQ - No Qualifier (for carbonyl sulfide and/or sulfur dioxide)

** - Co-eluters

ppbV - parts per billion by volume

μg / m3 - micrograms per cubic meter

 μ g / m3 = ppbV * (MW / 24.45)

Table 5 Sulphur Compounds Crow Lane Landfill Newburyport, MA March 9, 2006

Sample ID		V	Vell EW	-1	W	ell TEV	V-2		nlet Fla	re	AN	1B-1	ΑN	1B-2	Bac	kground
Compound	Molecular Weight	ppb\	1	μg/m3 ⁽¹⁾	ppb\	1	μg/m3 ⁽¹⁾	ppb\	/	μg/m3 ⁽¹⁾	ppbV	μg/m3 ⁽¹⁾	ppbV	μg/m3 ⁽¹⁾	ppb\	/ μg/m3 ⁽¹⁾
Hydrogen Sulfide	34.08	8,500,000	E	11,847,853	27,000,000	E	37,634,356	41,000,000	E	57,148,466	55 U	77	55 U	77	55	U 77
Carbonyl Sulfide /		840,000 /		2,064,100 /	1,600,000 /		3,931,600 /	3,500,000 /		8,600,400 /						
Sulfur Dioxide **	60.08/64.06	1,600,000	NQ/E	4,192,100	2,500,000	NQ/E	6,550,100	4,900,000	NQ/E	12,838,200	83 U		83 U		83	U
Methyl Mercaptan	48.11	550,000	U	1,082,229	290,000	U	570,630	540,000	U	1,062,552	55 U	108	55 U	108	55	U 108
Ethyl mercaptan	62.14	750,000	U	1,906,135	390,000	U	991,190	740,000	U	1,880,720	75 U	191	75 U	191	75	U 191
Dimethyl Sulfide	62.14	760,000	U	1,931,550	400,000	U	1,016,605	750,000	U	1,906,135	76 U	193	76 U	193	76	U 193
Isopropyl mercaptan	76.16	600,000	U	1,868,957	310,000	U	965,628	590,000	U	1,837,808	60 U	187	60 U	187	60	U 187
t-butyl mercaptan	90.19	490,000	U	1,807,489	250,000	U	922,188	490,000	U	1,807,489	49 U	181	49 U	181	49	U 181
Ethyl methyl sulfide	76.16	620,000	U	1,931,256	320,000	U	996,777	610,000	U	1,900,106	62 U	193	62 U	193	62	U 193
Dimethyl Disulfide	94.2	620,000	U	2,388,712	320,000	U	1,232,883	610,000	U	2,350,184	62 U	239	62 U	239	62	U 239

U - Not Detected

E - Estimated concentration, value is above the upper limit of calibration.

NQ - No Qualifier (for carbonyl sulfide and/or sulfur dioxide)

** - Co-eluters

ppbV - parts per billion by volume

μg/m3 - micrograms per cubic meter

(1) - Note ppbV results were converted to μ g/m3 using the following equation: μ g/m3 = ppbV * (MW / 24.45)

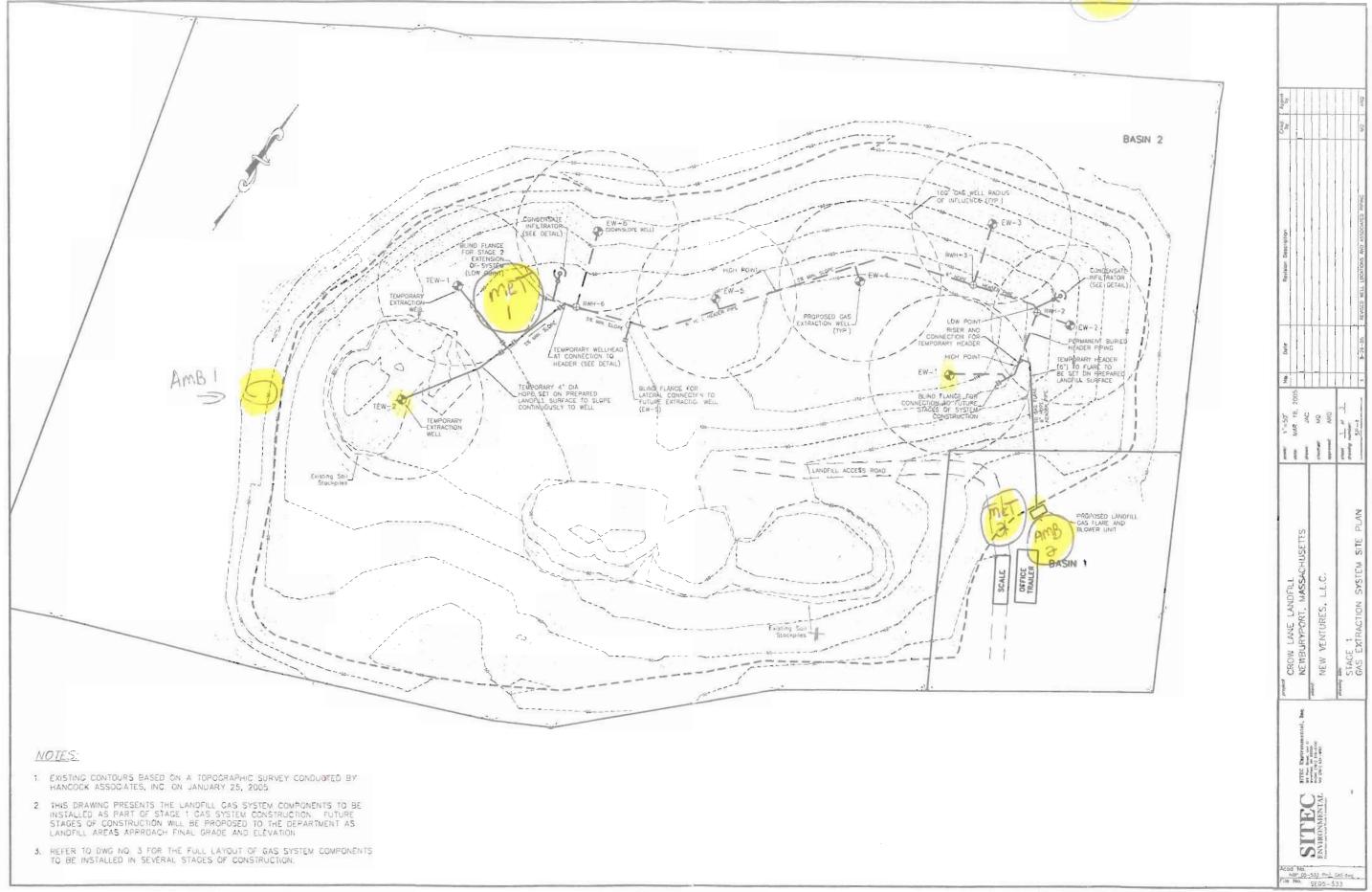


Table 6 Mercury and Arsine Compounds Crow Lane Landfill Newburyport, MA March 9, 2006

Sample ID	Well EW-1		Well TEW-2		Inlet Flare		AMB-1		AMB-2		Background	
Compound	mg/m³		mg/m ³		mg/m³		mg/m ³		mg/m ³		g/m ³ mg/m ³	
Mercury	<0.00167	U	<0.00180	U	<0.00142	U	<0.00195	U	<0.00184	U	<0.00185	U
Arsine	<0.000676	U	<0.00103	U	<0.000943	U	<0.00119	U	<0.000804	U	<0.000958	U

Sample Location Plan





Meteorological Data

CHAN UNITS FSCL ZERO	01 TEMP DEGF 122.0 -22.0	02 WDR DEG 360.0 0.0	03 WSP MPH 100.0 0.0	04 Bp Mb 1094 794	SD1 DEG 99.9 00.0
06:50 06:55 07:00 07:05 07:15 07:20 07:25 07:30 07:35 07:40 07:45 07:50 07:55 08:00	25.2F 25.3 25.6 26.0 26.4 26.6 27.3 27.3 27.6 27.8 27.9 28.2 28.4 28.4	335.3F 341.3 338.4 345.8 352.8 351.4 357.3 2.0 0.9 0.0 351.4 349.4 4.0 6.0 351.4	7.9F 5.3 5.4 5.5 4.9 4.5 5.7 6.9 5.6 7.3	1017F 1017 1017 1017 1017 1017 1017 1017	
0067	01 Lan	dfill	03/	′08/06	de de de de de
CHAN UNITS FSCL ZERO	01 TEMP DEGF 122.0	02 WDR DEG 360.0	03 WSP MPH 100.0	04 Bp Mb 1094 794	SD1 DEG 99.9 00.0
08:05 08:15 08:20 08:25 08:30 08:35 08:35 08:40 08:55 09:00 09:05 09:05 09:15 09:20 09:25 09:30 09:35 09:40 09:45 09:55 10:00	28.6 28.7 28.9 29.1 29.5 29.8 30.5 30.7 30.4 31.2 31.4 30.9 31.6 31.5 31.6 33.3 32.8 33.4	351.4 355.9 359.3 345.4 0.9 357.3 355.4 352.8 356.9 15.0 359.3 335.3 2.9 339.3 347.4 41.1 20.0 115.9 343.3 337.3 336.4 34.9	6.9 6.9 6.2 5.5 6.2 5.3 5.4 5.6 4.3 4.3 4.3 3.8 8.6 4.3 3.8 8.6	1017 1017 1017 1017 1017 1017 1017 1017	***** 30.0 19.4 24.9 26.7 17.0 14.7 38.8 49.4 24.4 28.4 61.2 30.0 19.4 24.9 26.7 17.0 14.7 38.8 49.4 24.4 26.7
0067	01 Lan	dfill	03/	08/06	

Landfill_5MIn.txt ========****

CHAN UNITS FSCL ZERO	-22.0	DEG 360.0 0.0	MPH 100.0	1094	SD1 DEG 99.9 00.0
10:05 10:10 10:15 10:20 10:25 10:30 10:35 10:40 10:55 11:00 11:05 11:10 11:15 11:20 11:25 11:30 11:35 11:40	33.6 34.7 34.8 33.8 35.3 35.7 34.9 35.3 35.7 34.9 36.8 36.9 36.9 36.9 37.6	29.9 123.8 79.9 36.9 49.0 123.8 0.0 34.0 315.9 262.3 265.3 227.9 231.8 166.1 253.3 208.8 234.9 288.4 332.1 289.3	2.4 1.5 2.7 2.0 2.9 2.3 5.8 5.2 3.4 5.5 5.2 3.5 5.3 5.3 5.3 5.3 5.3 5.3 5.3 5.3 5.3	1017 1017 1017 1017 1017 1017 1016 1016	19.6 33.8 57.9 72.5 17.3 52.7 15.0 24.0 38.5 45.3 40.8 44.7 19.6 33.8 57.9 72.5 17.3 52.7 15.0 24.0 38.5 44.7
0067	01 Lan	dfill	03,		
CHAN UNITS FSCL ZERO	01 TEMP DEGF 122.0 -22.0	02 WDR DEG 360.0	03 WSP MPH 100.0	0.4	99.9 00.0
12:05 12:10 12:15 12:20 12:25 12:30 12:35 12:40 12:45 12:50 13:05 13:10 13:15 13:20 13:25 13:30 13:35 13:34 13:45	37.9 36.4 35.8 35.6 36.1 35.8 36.2 35.8 35.8 36.0 36.0 36.0 35.5 36.7 36.7	333.4 87.0 103.9 96.1 101.9 110.9 111.1 103.9 96.9 94.0 96.1 104.9 103.0 126.0 90.0 125.8 110.0 88.0 103.0	3.4 6.4 7.2 7.7 6.0 7.1 6.7 7.3 6.7 8.1 7.3 8.3 8.3 8.7 6.6 6.8 7.9	1015	11.8 19.2

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Landfill_5MIn.txt
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37.6 103.9 7.0 1013 17.9
36.4 79.0 8.7 1013 12.8
13:50
13:55
14:00
0067 01 Landfill
                                                 03/08/06
_____****
01 02 03 04
CHAN TEMP WDR WSP Bp SD1
UNITS DEGF DEG MPH Mb DEG
FSCL 122.0 360.0 100.0 1094 99.9
ZERO -22.0 0.0 0.0 794 00.0
                                      ____****
                37.2 78.0 7.2 1013 23.3
36.9 103.0 8.1 1013 15.7
37.5 104.0 7.0 1013 14.2
37.4 90.9 8.0 1013 19.4
37.6 107.1 7.7 1013 16.8
37.3 101.0 7.9 1013 11.5
36.3 117.0 9.3 1013 15.9
36.6 110.0 8.9 1013 21.8
36.9 120.1 9.3 1013 13.1
37.1 128.0 8.1 1013 13.1
37.1 128.0 8.1 1013 13.2
36.6 130.9 8.7 1013 18.8
36.7 135.0 7.7 1013 19.5
37.5 117.0 6.8 1013 23.3
37.0 125.1 8.2 1013 15.7
37.4 115.0 7.3 1013 14.2
14:05
14:10
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                                              7.3
                                                              1013
                 37.4
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 15:15
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                             113.0
130.9
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                 38.5
 16:00
 0067 01 Landfill 03/08/06
 _____****
O1 O2 O3 O4

CHAN TEMP WDR WSP Bp SD1

UNITS DEGF DEG MPH Mb DEG

FSCL 122.0 360.0 100.0 1094 99.9

ZERO -22.0 0.0 0.0 794 00.0
16:05 38.6 139.0 7.2 1013 11.7 16:10 38.4 144.2 7.1 1013 9.0 16:15 37.9 145.8 8.3 1013 51.9 16:20 37.2 146.9 9.2 1013 0.4 16:25 37.0 149.0 7.6 1013 9.9 16:30 37.4 161.1 5.7 1013 11.4 16:35 37.3 153.9 5.7 1013 11.4 16:45 35.6 130.1 7.8 1013 12.1 16:45 35.6 130.1 7.6 1013 9.7 16:50 35.3 135.9 7.1 1013 12.1 16:55 35.3 148.0 6.1 1013 9.7 17:00 35.4 139.0 5.3 1013 15.3 17:05 35.2 135.0 5.7 1013 11.7 17:10 35.1 145.8 6.6 1013 9.0
 _____****
                 35.1 145.8 6.6
                                                          1013 9.0
 17:10
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Page 3

O1 O2 O3 O4 CHAN TEMP WDR WSP Bp SD1 UNITS DEGF DEG MPH Mb DEG FSCL 122.0 360 100.0 1094 99.9 ZERO -22.0 O 0.0 794 00.0 =================================	17:39:30	0067	01 Fla	ıre	03/08/		.txt
01:00 -22.0F 00F 0.0F 794F 0.0 02:00 -22.0F 00F 0.0F 794F 0.0 03:00 -22.0F 00F 0.0F 794F 0.0 04:00 -22.0F 00F 0.0F 794F 0.0 05:00 -22.0F 00F 0.0F 794F 0.0 06:00 -22.0F 00F 0.0F 794F 0.0 07:00 27.2< 346< 0.6< 1020< 14.2 08:00 30.4 10 0.7 1020 21.1 09:00 33.3 11 0.7 1020 26.8 10:00 36.1 10 0.3 1020 51.4 11:00 38.1 250 0.4 1019 66.2 12:00 40.2 236 0.4 1019 61.7 13:00 39.8 107 0.5 1017 36.0 14:00 40.4 116 0.7 1016 29.5 16:00 40.3 132 0.7 1016 29.5	UNITS FSCL ZERO	TEMP DEGF 122.0 -22.0	WDR DEG 360 0	WSP MPH 100.0 0.0	04 Bp Mb 1094 794	SD1 DEG 99.9 00.0	
17.00 33.2 1.1 0.7 1010 23.3	01:00 02:00 03:00 04:00 05:00 06:00 07:00 08:00 09:00 10:00 11:00 12:00 13:00 14:00 15:00	-22.0F -22.0F -22.0F -22.0F -22.0F -22.0F -22.0F -22.30.4 33.3 36.1 38.1 40.2 39.8 40.4 40.7	00F 00F 00F 00F 00F 346< 10 11 10 250 236 107 116 118	0.0F 0.0F 0.0F 0.0F 0.0F 0.6< 0.7 0.3 0.4 0.4 0.5 0.7	794F 794F 794F 794F 794F 1020< 1020 1020 1019 1017 1017	0.0 0.0 0.0 0.0 0.0 14.2 21.1 26.8 51.4 66.2 61.7 36.0 35.0 29.5	

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CHAN UNITS FSCL ZERO	01 TEMP DEGF 122.0 -22.0	02 WDR DEG 360 0	03 WSP MPH 100.0 0.0	04 Bp Mb 1094 794	SD1 DEG 99.9 00.0
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CHAN UNITS FSCL ZERO	01 TEMP DEGF 122.0 -22.0	02 WDR DEG 360 0	03 WSP MPH 100.0 0.0	04 Bp Mb 1094 794	SD1 DEG 99.9 00.0
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0067 01 Flare 03/08/06

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0067 01 Flare
                  03/08/06
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				Fla	re_5Min	.txt
16:45	37.6	130	0.7	1017	14.1	
16:50	37.6	141	0.6	1017	20.7	
16:55	37.3	142	0.4	1017	22.4	
17:00	37.1	129	0.4	1017	18.9	
17:05	36.8	136	0.5	1017	14.1	
17:10	36.6	152	0.5	1017	28.2	
17:15	36.3	145	0.5	1016	21.2	
17:20	36.1	133	0.5	1016	19.6	
17:25	36.0	125	0.3	1015	19.2	
17:30	35.6	120	0.1	1015	15.2	
17:35	35.6	108	0.0	1015	21.9	

Landfill_1Hr.txt

17:19:4		′ 01 La		03/08/ ======	
CHAN UNITS FSCL ZERO	01 TEMP DEGF 122.0 -22.0	02 WDR DEG	03 WSP MPH 100.0 0.0	04 вр мb 1094 794	SD1 DEG 99.9 00.0
01:00 02:00 03:00 04:00 05:00 06:00 07:00	-22.0F -22.0F -22.0F -22.0F -22.0F	00F 00F 00F 00F	0.0F 0.0F 0.0F 0.0F	794F 794F 794F 794F 794F	0.0 0.0 0.0 0.0
08:00	29.74	357.10	5.79	1017.	40.4
09:00	32.05	357.18	3.35	1017.	59.2
10:00	34.62	319.40	0.64	1016.	44.0
11:00	36.46	267.38	3.20	1015.	42.3
12:00	36.07	98.49	6.29	1014.	18.9
13:00	36.32	105.11	7.43	1013.	16.5
14:00	36.99	111.15	7.83	1013.	17.6
15:00	37.45	125.62	7.06	1012.	15.0
16:00	36.78	143.85	6.97	1012.	17.4
17:00	31.87<	139.20<	4.22<	1012.<	14.8<

Field Data Collection Sheets

CO, H2S, LEL (CH4), O2, Well Flow Rate and Vacuum

DATE: 3/8/06	MFG./MODEL	Land Tec Meter	SERIAL#	: Gm afo15/05
--------------	------------	----------------	---------	---------------

OPERATOR: Mass

TEWI

ON ANOTHING

Readings

Location	Time Sample Taken	CO ₂	ppm	LEL %	O ₂ %	Well Flow Rate	Well Vacu In H2o	Comments	
Ewi	17:10		3~0 T180				,		1
Well 1- ຂັນ i	14:08	27.4	.06%	19.2	7.4	att			
Well 2-	15:02	46.5	.490	28.3	3,2	11			
Well 3	15:38	46.4	.17 %	44.8	0.6				
Well 4-EWG	16:00	46.0	,25%		1.7				
Well 5-	16:15	39.5	19%	26.7	5.1				
Well 6- EW 4	16:30	32.0		31.2	4.9				
Well 7- Ew3	11-140	21.9	128 APM	1	10.1			Has From GA	CONTRA
Well 8 7 w 3	16.50	35.0	.26%		4.0		_/	130 14001 012	b 10 1 D
2 NO TUBE	17:15		.06 70	00 -			/		
Flare	14:00	27.2	.170	20,0	9,3				
Amb 1	6.30	0	~~` ~~~	_	- I				
Amb 2	8:30 9:15		.003-,650		31,0			Has HIGHT SAMP	CON WHILE
Amb 3 (BKG)	10(18	0	,003 −.6 81 0.0	0	30.9 30.6		and the second s	sηmβ	LM 6
ĺ		1		1			1		

Note - 1) Do Not use Jerome meter for Well measurements

²⁾ If H2S in the Well or the Flare or ambient site > 200 PPM, use Draeger Tube

Flow and Vacuum data collection sheet

MA-Newburyport-DEP, Crow Lane

operator 1 coll

WELL	size of pipe (inches)	vacuum (inch WC)	pitot tube head (inch WC)	
TEW-2		1-1,5" WELL PU		المراجع المراجع
TEW-1		0.0" WELL PU	YEING BELANGE WA	TERIN PIPE
EW-6		NO PORT FOR PHICA	14	UALUS CLOSED
EW-5		0.7" HRADEN	*	
EW-4		0.1" WELL	*	
EW-3		,33" WELL 25" HEROUR	TOO CLOSE TO UT WITH & HISROWN	REVERSED
EW-2		0.6" WELL	Too close To VI	LUD
EW-1		0.5" WELL 25" HEADUR	4	
flow at oxidizer		25"	.01"	

notes: * SOMETHING IN PIPE LOULD NOT STICK

PITOT TUES IN ALSO PITOT TO LANGE FOR HOLE

ONLY 4 PIPE. VALUES TO SOME WELL CLOSED

SOME JUST BARELY OPEN.

Ambient Siting -by H2S concentration 2 high impact sites and 1 Background

DATE: 3/8/06 MFG./MODEL Jerome Meter SERIAL #: 631-2313

OPERATOR: M Cobb

Readings

SW Flant

			ixoaai					
Location	Time Sample Taken		H₂S ppm					Comments
Amb 1	7:20 - 8	P:00	VAN	ous n	терть	D 867	worn).	,03-,050 003061
Amb 2	8:35-	9:45	//		11	n		003-081
Amb 3 (BKG)	9:50-		NO,	4				
AMB) e	λ 5ω	nlw6	www	0000	GOMI	ჳ e (50 <i>KS</i>	
Seguin Service (1985)				en er	generalistis para anti a con mengahi da	eller	SARSA PARTE CONTRACTOR SARSANS	
						-		

Note - 1) Use Land Tec meter if H2S conc > 50 PPB

AMBI SW SIDE OF LANDFILL ON ACCESS ROAD MARKED ON MAP

AMB 2 20' SOUTH OF FLARE

BACKGROUND SITE / MILE NORTH IN PARKAND LOT IN FRONT OF BLOCKBUSTER VILDO

²⁾ Likely, the 2 high impact sites could be located 1st SE portion of the landfill near area of the flare and 2nd be @ NW section of the landfill. The background site (Vital to be clean) could be area North of the landfill

Ambient site Sampling 2 high impact sites and 1 Background

DATE: 3/6/06

OPERATOR:

Sample Collection

Location	Start	End	Flow	Total	SAMPL	K	Comments	
	Time	Time	rate (SCCM)	Volume (liters)	(MIN)	H		
							SWON	ROAD
<u>Amb 1</u>							OCON COME	586055
Tedlar bag (<u>Sulfides)</u>	7:43	7:48		~10LT			.003 7050 ,	
SUMMA Canister	7:42	7 :42	GLAB				11	
Arsine	7:40	SOL	PRE 30,7 p.	57 4.21	26		Pump 54961	FLOW CHA
Mercury	7:30	9:12	250.0 239 9	10.28	42		Amp 54941	\$
Amb#2		20' 50	WITH OF	FLANT			0001 conts] 60KJ
Tedlar bag (<u>Sulfides)</u>	9:00	9:05	GRAB	~104			.003 ~.08/	
SUMMA <u>Caniste</u> r	8.49	8:49	guick carb				1.03) Hz	ی
<u>Arsine</u>	8:58	9.28	11.70 July 201.70	(0,22	30		AUMP 549443	
Mercury	8:53	935	PN: 1.6	10.86	42		549466	
Amb 3 (BKG)	1/2 MIL	thou s	H IN PAG	RING LOT	IN FR	onit o	F Blockbust	a ONECO
Tedlar bag (<u>Sulfides)</u>	10:11	10:16	0 4,50	N10IT				
SUMMA <u>Caniste</u> r	10:08	10:08	GNAB				_	
<u>Arsine</u>	9:57	10:33	ρης 3007 500.5 ρ	5502	26		1000 B	
Mercury	9:54	10:37	250 1 359 P	J 10.84	43		Rump 585183	

Well/Flare Sampling 2 wells and the Flare

OPERATOR: Has

Sample Collection

		Sam	pie Collect	ion			
Location	Start Time	End Time	Flow rate (SCCM)	Total Volume (liters)	SAMPLE LENGTH (MIN)	Comments	
						EWI	
Well 1							
Tedlar bag (<u>Sulfides)</u>	14:15	14:20	GRAB	NIOLT			
SUMMA Canister	14:21	14:21	GUI-K GLAB				,
Arsine	13:26	14:02	1947	7,40	38	PUMP 549.46 MISTURE INT	
Mercury	12:26	13:15	950.0 339.3 p	11,99	49	SAME FUMP MOISTURE INT	088
Well 2						TEW-2	
Tedlar bag (Sulfides)	15:32	15:27	GRAB	10IT			
SUMMA <u>Caniste</u> r	15:29	15:29	GRAB				20
Arsine	14.50 15 16	15:16 1402 NO	190 33.5 p	ST 4.86	26	PUMP 545463	MOUSTORE IN
Mercury	12:49	13:32	19.736	11.11	43	11 11	11
The Flare	_						
Tedlar bag (<u>Sulfides</u>)	111135	11:90	GRAB	2104		HIGA UACOU	^
SUMMA Canister	11:43	11.43	GRAB			VALUETO A	
Arsine	13:12	13:38	203/2043 P	st 5.30	36	Pump 549413	
Mercury	12:03	13:01	248.6	T 4CST 14.13	58	SAME ONE USE	o o
		-	1				

EWI

TEW-2

Field Log Entries

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DATE

1692031 - July 2012

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(m) (2005)				
Name	Address	Phone	Project	

INCHES

DMSUY

Clear Vinyl Protective Silpcovers (Item No. 30) are available for this style of notebook. Helps protect your notebook from wear & tear. Contact your dealer or the J. L. Darling Corporation.

DENGOVAL SAMPLING FOMPS CONTENTS REFERENCE 349616 360000 84443 5.65.78 1816643 グラグ 5.650 Min 1 / Ccc 9/100 203,3 25/18 WAGE PRE 250.0 256.4

CASISTER SAMPLE AMB ACRES AT SIR SISS G1586 MB 205 CHE SETTUD MET SITE & JER-189 C/S JIMOUDE ME OF O にあってにいい 2550 2.63

S.W. SLOK CHANGE COOK COME

1955 AND COES COSTO 3/62 3/6/2 3/6/2 3/6/2 3/6/2 3/6/2 3/6/2 5/6/2 6/2 3/6/2 3/6/2 3/6/2 5/6/2 6/2 6/2 3/6/2 3/6/2 5/2/2 6/2/2

AMD & 20 SOJH OF FLARE

8779 CANISTUR MS ~ 037

9.00-9.05 CAS SAMPLE HS .033 - .06/
ARSINS PUMP 549443 FREDOS POSTAIND

WARMY & UP, CLOOR, LIGHT.
WINDS, W/O CHANGING AT FLANS
SUIRLING.

BACKGROWN ABOUT / MORTH OF SANDFUL IN PARKING (ST IN FROME)
OF BLOCKBUSTLE VIKED
NOT TO MUCH TRAFFIL FOOT ASOS

PIESE 1.08E

marchy 1 systes

ng/s/c

CAL MERCAN PARP 5-19413 PRESSE CLUSCO CAL MERCAN PARP 5-19413 PRESSE ESTE 25813 3861

both Ambient Sites OFFICIAL
To collect Good SAMPLE, LIGHT
WINDS SWIRLING PHOWNO. My WOSE
MOTHER WITH THE HOS. I SMELL
IT, THEN IT GOOD HUMMY A FEW
SECONDS LATER JORGANE. WE DID THE
BOST WE COUND BUT MAY NOWD!
TO GO BACK WHON LOCK WINDY.

They responded there up to TAME Flow responded to TON ORAGOON THEE WHEN WEST A VONZ HICH REPORTED TO MAY BE BOUTUSE OF HICH USENOWN

GEM 2000 MOLTI GAS METER SAJ GM 38015/05 CALDATE 3/6/06

S

DEROME MUTUR S/NU31-2313 CALDATE 13/28/05

ALL WELL GAS PLEADINGS ARE ON SUPERIFF SHEETS WAS UNABLE TO DO FLOWS
BUCAUSE TITERE WAS SOMETHING
INSIDE DIDE COULD NOT STICK
POTOTINETER IN ALSO HOLS TO SMALL
ONLY AR 41" DIDE.

41AO FLANE TOES LOFT

50 010 FLANE + EWI ACAIN

EWI AND TWE 10573

FLANE 11 000 000

FINISHED SAMPLING ~ 17:15

LEANE SITE 18:05

Gas Flow Calculation

Given: Air @ 25"we vacuum, 4" seh 40 pipe averaging potof tube with K= 0.66

Find: Howe 0.01"we relocity head

Solution

$$Q = VA \qquad V = \sqrt{2g} \Delta h \qquad A = \frac{1}{4} d^2$$

$$Q = K \sqrt{2g} \Delta h \qquad Td^2$$

$$Q_m = 0.39 \text{ mcfs}$$

 $\times 60 \frac{\text{sle/min}}{\text{min}}$

Dennis Rentschler / ENSR

Raw Data



Experience is the solution

314 North Pearl Street ◆ Albany, New York 12207 (800) 848-4983 ◆ (518) 434-4546 ◆ Fax (518) 434-0891

March 17, 2006

Steve Wright ENSR Corporation 2 Technology Park Drive Westford, MA 01886

TEL: (978) 589-3000

FAX: (978) 589-3100

RE: Crow Lane Landfill, MA

Crow Lane Landfill

Dear Steve Wright:

Adirondack Environmental Services, Inc received 12 samples on 3/10/2006 for the analyses presented in the following report.

There were no problems with the analyses and all associated QC met EPA or laboratory specifications, except if noted.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Work Order No: 060310003

PO#: Call Steve Wright for PO

AIHA#: 100307

Christopher Hess QA Manager

Steve Wright - FAX

Analytical Results for

ENSR Corporation

WorkOrder:

060310003

Client Reference:

Crow Lane Landfill, MA

PO#: Call Steve Wright for PO

Analyte	Concentration (ug) (mg/m³) (ppm)	Limit of Detection (ug)	Qual Test Method	Date Analyzed /Analyst
Client ID: AMB 1	Lab ID: 001A Date Sampled: 3/8	/2006		Air Vol.(L): 10.28
Mercury	<0.0200 <0.00195	0.02	Niosh 6009	03/17/2006 KH
Client ID: AMB 2	Lab ID: 002A Date Sampled: 3/8	/2006		Air Vol.(L): 10.86
Mercury	<0.0200 <0.00184	0.02	Niosh 6009	03/17/2006 KH
Client ID: Background	Lab ID: 003A Date Sampled: 3/8	/2006		Air Vol.(L): 10.84
Mercury	<0.0200 <0.00185	0.02	Niosh 6009	03/17/2006 KH
Client ID: EW 1	Lab ID: 004A Date Sampled: 3/8	/2006		Air Vol.(L): 11.99
Mercury	<0.0200 <0.00167	0.02	Niosh 6009	03/17/2006 KH
Client ID: TEW 2	Lab ID: 005A Date Sampled: 3/8	/2006		Air Vol.(L): 11.11
Mercury	<0.0200 <0.00180	0.02	Niosh 6009	03/17/2006 KH
Client ID: Flare Inlet	Lab ID: 006A Date Sampled: 3/8	/2006		Air Vol.(L): 14.13
Mercury	<0.0200 <0.00142	0.02	Niosh 6009	03/17/2006 KH
Client ID: AMB 1	Lab ID: 007A Date Sampled: 3/8	/2006		Air Vol.(L): 4.21
Arsine(arsenic trihydride),as As	<0.00500 <0.00119	0.005	NIOSH 6001	03/17/2006 SM
Client ID: AMB 2	Lab ID: 008A Date Sampled: 3/8	/2006		Air Vol.(L): 6.22
Arsine(arsenic trihydride),as As	<0.00500 <0.000804	0.005	NIOSH 6001	03/17/2006 SM
Client ID: Background	Lab ID: 009A Date Sampled: 3/8	/2006		Air Vol.(L): 5.22
Arsine(arsenic trihydride),as As	<0.00500 <0.000958	0.005	NIOSH 6001	03/17/2006 SM
Client ID: EW 1	Lab ID: 010A Date Sampled: 3/8	/2006		Air Vol.(L): 7.4
Arsine(arsenic trihydride),as As	<0.00500 <0.000676	0.005	NIOSH 6001	03/17/2006 SM
Client ID: TEW 2	Lab ID: 011A Date Sampled: 3/8	/2006		Air Vol.(L): 4.86
Arsine(arsenic trihydride),as As	<0.00500 <0.00103	0.005	NIOSH 6001	03/17/2006 SM
Client ID: Flare Inlet	Lab ID: 012A Date Sampled: 3/8	/2006		Air Vol.(L): 5.3
Arsine(arsenic trihydride),as As	<0.00500 <0.000943	0.005	NIOSH 6001	03/17/2006 SM

General Notes:

Results have not been Blank Corrected

<: Less than the indicated limit of detection (LOD).

^{--:} Information not available or not applicable.



314 North Pearl Street Albany, New York 12207 518-434-4546/434-0891 FAX



REQUEST FOR INDUSTRIAL HYGIENE ANALYSIS

CLIENT NAME	usR	PROJE	CT NAME (LO	cation) NC UANC	FILL	8	RS' (Names)	dd	
ADDRESS 2 ·	TECHNOLOGY PK.O	PO NU		16 WRIGH	TATE	SAMPLE	RS' (Signatures	5)	
AES SAMPLE NUMBER	SAMPLE IDENTIFICATION	DATE SAMPLED	TIME A = A.M. P = P.M.	MEDIA TYPE/ MATRIX	NO. OF CONT'S	TOTAL SAMPLING TIME (MIN.)	AIR SAMPLE VOLUME (LITERS)	ANALYSIS REQUESTE	D
661	AMB 1	3/8/06	A P	TUBE		42	10.28	MERCU	27 NG
200	AMB 2	/ /	A P	Į.		42	10.86	Aurospeak	
003	BACKGROUND	190 Advisoria	A P			43	10.84	A Company of the Comp	
004	EWI	NETHALOGOPH, January	A P	100		49	11.99	WWW.	
005	TEWZ		A P	engy, ye and an end of the second		43	in the second se	Angelon Contraction	
000	FLANE INLET	Andrew Encyclosed Special Spec	A P A			58	14.13	Victoria	
007	AMB	MATTERIAL LANGUA MARTINI SALES	P A P			24	4.31	Azsme	nuoni
6008	AMB &	**************************************	A	ss according splick and		30	632	1	<u> </u>
009	BACKGROUND	Por Valence (male), in a	AP	and a second		26	5.22		
010	EWI	The state of the s	A P			38	7.40		
011	Tewa	No. of the Control of	A P	- Andrew - A		76	4.86	Physical Physics (1974)	ч -
012	FLANT INLET	ANNE STORY (LINE AND	A P	destruction of the second		26	5.30		
		V	A P						
SEND REPORT T	WRIGHT EN	. 74	NVOICE TO			Samples		ood condition: proper media:	
*STANDARD S *RUSH SERVI FAX RESULTS PHONE RESU Turn-around time Please inquire for	TO:	WEEK 7	FAX	# <u>(</u> # <u>) -</u> # <u>(97k) 58</u> %					
.ABORATORY AF	PPROVAL	DA	TE TIN	AE RECEIVED F	OR LABORA	TORY BY		DATE 3/0/06	TIME 850
CHAIN OF CUSTO									****
RELINQUISHED I	BY (Signature)		RECEI	VED BY (Signature)			DATE	TIME
RELINQUISHED I	BY (Signature)		RECEI	VED BY (Signature)				DATE	TIME



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TERMS, CONDITIONS & LIMITATIONS

All Services rendered by **Adirondack Environmental Services**, **Inc.** are undertaken and all rates are based upon the following terms:

- (a) Neither Adirondack Environmental Services, Inc., nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of Adirondack Environmental Services, Inc.'s performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against Adirondack Environmental Services, Inc. arising out of its work.
- (b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed as irrevocably waived.
- (c) Adirondack Environmental Services, Inc. reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an Adirondack Environmental Services, Inc. report by other than our customer does not constitute a representation of Adirondack Environmental Services, Inc. as to the accuracy of the contents thereof.
- (d) In no event shall Adirondack Environmental Services, Inc., its employees agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.
- (e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services**, **Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services**, **Inc.**
- (f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and Adirondack Environmental Services, Inc. is not responsible for the accuracy of this information.



314 North Pearl Street Albany, New York 12207 518-434-4546/434-0891 FAX

REQUEST FOR INDUSTRIAL HYGIENE ANALYSIS

CLIENT NAME			ECT NAME (Lo	ocation)	のディレ		RS' (Names)		
ADDRESS 3	TOLHNOLOGY PKE	PO NU	JMBER	12 W 216:	incomes and	SAMPLE	RS' (Signatures	s)	
AES Sample Number	SAMPLE IDENTIFICATION	DATE Sampled	TIME A = A.M. P = P.M.	MEDIA TYPE/ Matrix	NO. OF CONT'S	TOTAL SAMPLING TIME (MIN.)	AIR SAMPLE VOLUME (LITERS)	ANALYS REQUEST	IS ED
	Ame !	3/8/06	A P	TUBE		43	10 A Š		/ C / No
	AMB A		A P	:		43	10-36	Philips Art	
	BACKSON	Completely self-sec	A P			4 3	10.85	And the state of t	
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		and the state of t	A P						
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	Am & A	4	A P			30	w 3 A	<u> </u>	2 10 32 2
	BACKGROUND	Tradac salphi	A				7. 8 8		
	Name of the State		A	-		34	7.40		
	TO BY GA		AP				4 1 1 100	* Williams	
	State Control of the	and have facult	A			4 6	530		
		V	A			-			
SEND REPORT TO	Whor En	. A .	NVOICE TO				collected on	ood condition: _ proper media:	
□ *STANDARD S Ø *RUSH SERVII □ FAX RESULTS □ PHONE RESUL Turn-around time v	TIME — PLEASE CHECK ALL THAT ERVICE CE — Results requested by: TO: TS TO: varies by substance. For most substanc capacity of rush analysis.		FAX	(# <u>(</u>) # <u>(1)~)</u> ??	<u>.</u>				
ABORATORY AP		DA	TE TIN	/IE RECEIVED	FOR LABORAT	TORY BY		DATE	TIME
CHAIN OF CUSTO	DY								
ELINQUISHED B	Y (Signature)		RECEI	VED BY (Signatur	е)	****		DATE	TIME
ELINQUISHED BY (Signature)			RECEI	VED BY (Signatur	e)			DATE	TIME

WHITE — Lab Copy

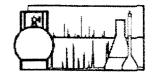
YELLOW — Sampler Copy

PINK — Generator Copy



ENGR

Plarvard Ak Labesatyry, 326 Ayer Khad, Harverd, Massischusetts. 31463 1 918 172 1848: F.978 172 4888 indowerser laberature.



ENSR Air Toxics Specialty Laboratory Analytical Report

Client:

Steve Wright

ENSR

2 Technology Park Drive Westford, MA 01886

Laboratory ID: 06-061 TO-15

Date(s) Received: 3/9/06

Client ID: 10736-001

All work contained in this report has been done in accordance with laboratory standard operating procedures. ENSR's Air Toxics Specialty Laboratory follows methodologies based upon standard EPA/NIOSH/OSHA Methods. Data contained herein should be considered accurate and complete to the best of our knowledge. This report cannot be duplicated in part without the written permission of ENSR.

Christopher Philbrick

Senior Chemist

ENSR Air Toxics Specialty Laboratory

20 / 40 Date





Air Toxics Specialty Laboratory



Case Narrative

Re:

Volatile Organic Analysis of SUMMA® Canisters by Gas Chromatography/Mass Spectrometry (GC/MS) – Crow Landfill

Project #:

10736-001

LAB ID #:

06-061

ANALYTICAL PROCEDURE:

Seven (7) SUMMA® canister samples, including one trip blank, were analyzed for ENSR's TO-15 compound list under the guidelines of EPA TO-15, <u>Determination of Volatile Organic Compounds</u> (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed by Gas Chromatography Mass Spectrometry (GC/MS).

A Hewlett Packard 6890 gas chromatograph equipped with a Hewlett Packard 5973 mass selective detector (MSD) was employed for the analysis. A Nutech 3550A/3600 automatic concentrator was utilized for pre-concentration.

A 500-mL and/or 25-ml aliquot was drawn from each sample, concentrated at -160 $^{\circ}$ C and then transferred to the GC/MSD for the analysis. The operating conditions of the GC/MSD are listed in Table 1.

GC/MSD calibration was performed with canister standards prepared for each target compound. Five to six-point calibrations were generated for each compound using these standards.

No problems occurred during sample receipt or login.

The sulfur analytes are reported under a separate cover letter.

QUALITY CONTROL:

- 1. A laboratory blank was analyzed daily prior to sample analysis in the same manner as the samples. Target compounds were not detected in the blank.
- 2. A laboratory check standard (LCS) was analyzed with the batch of samples. All percent recoveries were within the laboratory's QC acceptance limits.
- Sample [AMB-1] was analyzed in duplicate. No compounds were detected in the initial or duplicate runs.
 Precision has been deemed acceptable. It should be noted that no tentatively identified compound
 information is provided on the duplicate report.
- 4. The SUMMA canisters for the samples were cleaned on 2/23/06 and 3/7/06 and were certified clean by the analysis of one canister (A204, A219) from each cleaning batch.

Air Toxics Specialty Laboratory



DISCUSSION:

- 1. Per the client's request, tentatively identified compounds (TICs) were identified and estimated concentrations were reported as part of the sample results.
- 2. Samples [WELL EW 1], [WELL TEW 2] and [INLET FLARE] were analyzed initially as twenty fold dilutions due to the expected elevated concentrations of target analytes which would have exceeded the calibrated range of the instrument and/or caused detector saturation if analyzed undiluted. The concentrations of acetone, trichlorofluoromethane, n-hexane, n-heptane and/or toluene in the samples still exceeded the calibrated range of the instrument. Due to analytical limitations, a further dilution was not performed. These diluted values have been reported and flagged with an "E" and should be considered estimated.
- Due to high levels of hydrogen sulfide samples [WELL EW 1], [WELL TEW 2] and [INLET FLARE] yielded recoveries of the first and/or second internal standards that were below the laboratory's QC acceptance limits. Due to turn-around-time requirements, results from these initial analyses were reported.

TABLE 1

GC/MSD Operating Conditions

Comes operating conditions					
Hewlett Packard 6890 GC/ 5973 MSD					
220°C					
Rtx-1 60 m Capillary					
0.25mm ID, 1.0µm df					
UHP Helium; Flow rate = 2.0 cc/min					
Mass Selective detector; Temperature: 240°C					
Initial Temp.: 10°C Hold: 6.0 min					
Ramping Rate: 8.0°C/min					
Final Temp: 170°C Time 5. 0 min					
HP ChemStation					



Air Toxics Specialty Laboratory



TABLE 2
SUMMARY OF MAJOR METHOD MODIFICATIONS USED

TO-15 Method Requirement	ENSR SOP (ATSOP041) Requirement	Analytes Flagged
Initial calibration: All %RSDs must be <30%, with no more than two up to 40%	All %RSDs for NJ NELAP certified analytes must be <30% with no more than two up to 40%, for all other compounds if >30% may use linear or quadratic regression with R² of ≥0.990	N/A
Continuing/daily calibration: All %Ds must be less than 30%	All %Ds must be less than 30% for NJ NELAP certified analytes, with no more than 4 other compounds at 30-50%	N/A
BFB acceptance criteria	SW846 criteria (built into Chemstation software—more stringent than method requirements)	N/A
Replicate precision: Must be within 25%	Replicates must be within 30%	N/A

Date Analysis Started: 3/15/06

R:\Air_Tox\LAB\2006 Reports\06-061 Crow Landfill (TO15)\06-061 TO-15rpt.doc

				1	
Client:	Crow Landfill	Lab Sample ID:	06-061-1	Client Sample ID:	AMB-1
Laboratory ID:	06-061	Data File ID:	031406_09.D	Date Sampled:	3/8/06
Date Received:	3/9/06	Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 4:27 am

Compound	CAS#	ppbV	ug/m³
propylene	115-7-1	0.50 U	0.86 U
dichlorodifluoromethane	75-71-8	0.50 U	2.5 U
chloromethane	74-87-3	0.50 U	1.0 U
Freon-114	76-14-2	0.50 U	3.5 U
vinyl chloride	75-01-4	0.50 U	1.3 U
1,3-butadiene	106-99-0	0.50 U	1.1 U
bromomethane	74-83-9	0.50 U	1.9 U
chloroethane	75-00-3	0.50 U	1.3 U
vinyl bromíde	593-60-2	0.50 U	2.2 U
acetone	67-64-1	1.0 U	2.4 U
trichlorofluoromethane	75-69-4	0.50 U	2.8 U
isopropanol	67-63-0	1.0 U	2.5 U
1,1-dichloroethene	75-35-4	0.50 U	2.0 U
methylene chloride	75-09-2	1.0 U	3.5 U
3-chloropropene	107-05-1	0.50 U	1.6 U
carbon disulfide	75-15-0	0.50 U	1.6 U
Freon-113	76-13-1	0.50 U	3.8 U
trans-1,2-dichloroethene	156-60-5	0.50 U	2.0 U
1,1-dichloroethane	75-34-3	0.50 U	2.0 U
MTBE	1634-04-4	0.50 U	1.8 U
vinyl acetate	108-05-4	0.50 U	1,8 U
2-butanone (MEK)	78-93-3	0.50 ∪	1,5 U
cis-1,2-dichloroethene	156-59-2	0.50 U	2.0 U
n-hexane	110-54-3	0.50 U	1.8 U
chloroform	67-66-3	0.50 U	2.4 U
ethyl acetate	141-78-6	0.50 ∪	1.8 U
tetrahydrofuran	109-99-9	0.50 U	1.5 U
1.2-dichloroethane	107-06-2	0.50 U	2.0 U
1,1,1-trichloroethane	71-55-6	0.50 U	2.7 U
benzene	71-43-2	0.50 U	1.6 U
carbon tetrachloride	56-23-5	0.50 U	3.1 U
cyclohexane	110-82-7	0.50 U	1.7 U
1,2-dichloropropane	78-87-5	0.50 ∪	2.3 ∪
bromodichloromethane	75-27-4	0.50 ∪	3.4 U
2,2,4-trimethylpentane	540-84-1	0.50 ∪	2.3 U
1,4-dioxane	123-91-1	0.50 U	1.8 U
n-heptane	142-82-5	0.50 U	2.0 U
trichioroethene	79-01-6	0.50 U	2.7 U
cis-1,3-dichloropropene	10061-01-5	0.50 U	2.3 U
MIBK	108-10-1	0.50 U	2.0 U
trans-1.3-dichloropropene	10061-02-6	0. 50 U	2.3 U
1,1,2-trichloroethane	79-00-5	0. 50 U	2.7 U
toluene	108-88-3	0.50 U	1.9 U
2-hexanone	591-78-6	0.50 U	2.0 U
dibromochloromethane	124-48-1	0.50 U	4.3 U
1,2-dibromoethane	106-93-4	0.50 U	3.8 U

U = undetected at specified reporting limit

Client:_	Crow Landfill	Lab Sample ID:	06-061-1	Client Sample ID:	AMB-1
Laboratory ID:	06-061	Data File ID:	031406_09.D	Date Sampled:	3/8/06
Date Received:	3/9/06	Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 4:27 am

Compound	CAS#	ppbV	ug/m³
tetrachloroethene	127-18-4	0.50 U	3.4 U
chlorobenzene	108-90-7	0. 50 U	2.3 U
ethylbenzene	100-41-4	0.50 U	2.2 U
p & m-xylene	106-42-3 & 108-38-3	1.0 U	4.3 U
bromoform	75-25-2	0.50 U	5.2 U
styrene	100-42-5	0.50 U	2.1 U
1,1,2,2-tetrachloroethane	79-34-5	0.50 U	3.4 U
o-xylene	95-47-6	0.50 U	2.2 U
4-ethyl toluene	622-96-8	0.50 U	2.5 U
1,3,5-trimethylbenzene	108-67-8	0.50 U	2.5 U
1,2,4-trimethylbenzene	95-63-6	0.50 U	2.5 ∪
benzyl chloride	100-44-7	0.50 U	2.6 U
1,3-dichlorobenzene	541-73-1	0.50 U	3.0 U
1,4-dichlorobenzene	106-46-7	0.50 U	3.0 U
1,2-dichlorobenzene	95-50-1	0.50 U	3.0 U
1,2,4-trichiorobenzene	120-82-1	0.50 U	3.7 U
hexachlorobutadiene	87-68-3	0.50 U	5.3 U

TENTATIVELY IDENTIFIED COMPOUNDS

Client:	Crow Landfill	Lab Sample (D:	06-061-1	Client Sample ID:	AMB-1
Laboratory ID:	06-061	Data File ID:	031406_09.D	Date Sampled:	3/8/06
Date Received:	3/9/06	Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 4:27 am

Compound	RT (min)	CAS#	Estimated ppbV
No tentatively identified compounds			

Client:	Crow Landfill	Lab Sample ID:	06-061-2	Client Sample ID:	AMB-2
Laboratory ID:	06-061	Data File ID:	031406_11.D	Date Sampled:	3/8/06
Date Received:	3/9/06	Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 6:32 am

Compound	CAS#	ррbV	ug/m³
propylene	115-7-1	0.50 U	0.86 U
dichlorodifluoromethane	75-71-8	0.50 U	2.5 U
chloromethane	74-87-3	0.50 ∪	1.0 U
Freon-114	76-14-2	0.50 U	3.5 U
vinyl chloride	75-01-4	0.50 U	1.3 U
1,3-butadiene	106-99-0	0.50 U	1.1 U
bromomethane	74-83-9	0.5 0 U	1.9 U
chloroethane	75-00-3	0.50 U	1,3 ∪
vinyl bromide	593-60-2	0.50 U	2.2 U
acetone	67-64-1	1.0 U	2.4 U
trichlorofluoromethane	75-69-4	0.50 U	2.8 U
isopropanol	67-63-0	1.0 U	2.5 ∪
1,1-dichloroethene	75-35-4	0.50 U	2.0 U
methylene chloride	75-09-2	1.0 U	3.5 U
3-chloropropene	107-05-1	0.50 U	1.6 U
carbon disulfide	75-15-0	0.50 U	1.6 U
Freon-113	76-13-1	0.50 U	3.8 U
trans-1,2-dichloroethene	156-60-5	0.50 U	2.0 U
1.1-dichloroethane	75-34-3	0.50 U	2.0 U
мтвє	1634-04-4	0.50 U	1.8 U
vinyl acetate	108-05-4	0.50 U	1.8 U
2-butanone (MEK)	78-93-3	0.50 U	1.5 U
cis-1.2-dichloroethene	156-59-2	0.50 U	2.0 U
n-hexane	110-54-3	0.50 U	1.8 U
chloroform	67-66-3	0.50 U	2.4 U
ethyl acetate	141-78-6	0.50 U	1.8 U
tetrahydrofuran	109-99-9	0.50 U	1.5 U
1,2-dichloroethane	107-06-2	0.50 U	2.0 U
1,1,1-trichloroethane	71-55-6	0.50 U	2.7 U
benzene	71-43-2	0.50 U	1.6 U
carbon tetrachloride	56-23-5	0.50 U	3.1 U
cyclohexane	110-82-7	0.50 U	1.7 U
1,2-dichloropropane	78-87-5	0. 50 U	2.3 U
bromodichloromethane	75-27-4	0.50 U	3.4 U
2,2,4-trimethylpentane	540-84-1	0.50 U	2.3 U
1,4-dioxane	123-91-1	0.50 U	1.8 U
n-heptane	142-82-5	0.50 U	2.0 U
trichloroethene	79-01-6	0.50 U	2.7 U
cis-1,3-dichloropropene	10061-01-5	0.50 U	2.3 U
MIBK	108-10-1	0.50 U	2.0 U
trans-1,3-dichloropropene	10061-02-6	0.50 U	2.3 U
1,1,2-trichioroethane	79-00-5	0.50 U	2.7 U
toluene	108-88-3	0. 50 U	1,9 U
2-hexanone	591-78-6	0.5 0 U	2.0 U
dibromochloromethane	124-48-1	0.50 U	4.3 U
1,2-dibromoethane	106-93-4	0.50 U	3.8 U

U = undetected at specified reporting limit

Client:	Crow Landfill	Lab Sample ID:	06-061-2	Client Sample ID:	AMB-2
Laboratory ID:	06-061	Data File ID:	031406_11.D	Date Sampled:	3/8/06
Date Received:	3/9/06	Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 6:32 am

Compound	CAS#	ррЬV	ug/m³
tetrachloroethene	127-18-4	0.50 U	3.4 U
chlorobenzene	108-90-7	0.50 U	2.3 U
ethylbenzene	100-41-4	0.50 U	2.2 U
p & m-xylene	106-42-3 & 108-38-3	1.0 U	4.3 U
bromoform	75-25-2	0.50 U	5.2 U
styrene	100-42-5	0.50 U	2.1 U
1,1,2,2-tetrachloroethane	79-34-5	0.50 ∪	3.4 ∪
o-xylene	95-47-6	0.50 U	2.2 U
4-ethyl toluene	622-96-8	0.50 U	2.5 U
1,3,5-trimethylbenzene	108-67-8	0.50 U	2.5 U
1,2,4-trimethylbenzene	95-63-6	0.50 U	2.5 ∪
benzyl chloride	100-44-7	0.50 U	2.6 U
1,3-dichlorobenzene	541-73-1	0.50 U	3.0 U
1,4-dichlorobenzene	106-46-7	0.50 U	3.0 U
1,2-dichlorobenzene	95-50-1	0.50 U	3.0 U
1,2,4-trichlorobenzene	120-82-1	0.50 U	3.7 U
hexachlorobutadiene	87-68-3	0.50 U	5.3 U

TENTATIVELY IDENTIFIED COMPOUNDS

Client:_	Cr	ow Landfill	Lab Sample ID:	06-061-2	Client Sample ID:	AMB-2
Laboratory (D:_	06-061		Data File ID:	031406_11.D	Date Sampled:	3/8/06
Date Received:	3/9/06		Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 6:32 am

Compound	RT (min)	CAS#	Estimated ppbV
No tentatively identified compounds			

Client:	Crow Landfill	Lab Sample ID:	06-061-3	Client Sample ID:	BACKGROUND
Laboratory ID:	06-061	Data File ID:	031406_12.D	Date Sampled:	3/8/06
Date Received:	3/9/06	Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 7:34 am

Compound	CAS#	ppbV	ug/m³
propylene	115-7-1	0.50 U	0.86 U
dichlorodifluoromethane	75-71-8	0.50 U	2.5 U
chloromethane	74-87-3	0.50 U	1.0 U
Freon-114	76-14-2	0.50 U	3.5 U
vinyl chloride	75-01-4	0.50 U	1.3 U
1,3-butadiene	106-99-0	0.50 U	1.1 U
bromomethane	74-83-9	0.50 U	1.9 U
chloroethane	75-00-3	0.50 U	1.3 U
vinyl bromide	593-60-2	0.50 U	2.2 U
acetone	67-64-1	1.0 U	2.4 U
trichlorofluoromethane	75-69-4	0.50 U	2.8 U
isopropanol	67-63-0	1.0 U	2.5 U
1,1-dichloroethene	75-35-4	0.50 U	2.0 U
methylene chloride	75-09-2	1.0 U	3.5 U
3-chloropropene	107-05-1	0.50 ∪	1.6 U
carbon disulfide	75-15-0	0.50 U	1.6 U
Freon-113	76-13-1	0.50 U	3.8 U
trans-1,2-dichloroethene	156-60-5	0.50 U	2.0 U
1,1-dichloroethane	75-34-3	0.50 U	2.0 U
MTBE	1634-04-4	0.50 U	1.8 U
inyl acetate	108-05-4	0.50 U	1.8 U
2-butanone (MEK)	78-93-3	0.50 U	1.5 U
cis-1,2-dichloroethene	156-59-2	0.50 U	2.0 U
n-hexane	110-54-3	0.50 U	1.8 U
chloroform	67-66-3	0.50 U	2.4 U
ethyl acetate	141-78-6	0.50 U	1.8 U
etrahydrofuran	109-99-9	0.50 U	1.5 U
1,2-dichloroethane	107-06-2	0.50 U	2.0 U
,1,1-trichloroethane	71-55-6	0.50 U	2.7 U
enzene	71-43-2	0.50 U	1.6 U
arbon tetrachloride	56-23-5	0.50 U	3.1 U
cyclohexane	110-82-7	0.50 U	1.7 U
,2-dichloropropane	78-87-5	0.50 U	2.3 U
romodichloromethane	75-27-4	0.50 U	3.4 U
,2,4-trimethylpentane	540-84-1	0.50 U	2.3 U
,4-dioxane	123-91-1	0.50 U	1.8 U
-heptane	142-82-5	0.50 U	2.0 U
ichloroethene	79-01-6	0.50 U	2.0 U 2.7 U
is-1,3-dichloropropene	10061-01-5	0.50 U	2.7 U
IBK	108-10-1	0.50 U	
ans-1,3-dichloropropene	10061-02-6	0.50 U	2.0 U 2.3 U
1,2-trichioroethane	79-00-5	0.50 U	
luene	108-88-3	0.50 U	2.7 U
hexanone	591-78-6		1.9 U
bromochioromethane	124-48-1	0.50 U	2.0 U
2-dibromoethane	106-93-4	0.50 U	4.3 U
	1 100-33-4	0.50 U	3.8 U

U = undetected at specified reporting limit

B = analyte found in blank

Client:		Crow Landfill	Lab Sample ID:	06-061-3	Client Sample ID:	BACKGROUND
Laboratory ID:	06-061		Data File ID:	031406_12.D	Date Sampled:	3/8/06
Date Received:	3/9/06		Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 7:34 am

Compound	CAS#	ррЬV	ug/m³
tetrachloroethene	127-18-4	0.50 U	3.4 U
chlorobenzene	108-90-7	0.50 U	2.3 U
ethylbenzene	100-41-4	0.50 U	2.2 U
p & m-xylene	106-42-3 & 108-38-3	1.0 U	4.3 U
bromoform	75-25-2	0.50 U	5.2 U
styrene	100-42-5	0.50 U	2.1 U
1,1,2,2-tetrachioroethane	79-34-5	0.50 U	3.4 U
o-xylene	95-47-6	0.50 U	2.2 U
4-ethyl toluene	622-96-8	0.50 U	2.5 U
1,3,5-trimethylbenzene	108-67-8	0.50 U	2.5 U
1,2,4-trimethylbenzene	95-63-6	0.50 U	2.5 U
benzyl chloride	100-44-7	0.50 U	2.6 U
1,3-dichlorobenzene	541-73-1	0.50 U	3.0 U
1,4-dichlorobenzene	106-46-7	0.50 U	3.0 U
1.2-dichlorobenzene	95-50-1	0.50 U	3.0 U
1,2,4-trichlorobenzene	120-82-1	0.50 U	3.7 U
hexachlorobutadiene	87-68-3	0.50 U	5.3 U

TENTATIVELY IDENTIFIED COMPOUNDS

Client:		Crow Landfill	Lab Sample ID:	06-061-3	Client Sample ID:	BACKGROUND
Laboratory ID:	N/A		Data File ID:	031406_12.D	Date Sampled:	3/8/06
Date Received:	3/9/06		Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 7:34 am

Compound	RT (min)	CAS#	Estimated ppbV
No tentatively identified compounds			

Client:		Prow Landfill	Lab Sample ID:	06-061-4 20X	Client Sample ID:	WELL EW 1
Laboratory ID:	06-061		Data File ID:	031406_13.D	Date Sampled:	3/8/06
Date Received:	3/9/06		Dilution Factor:	20	Date & Time Analyzed:	16 Mar 2006 8:22 am

Compound	CAS#	ppbV	ug/m³
propylene	115-7-1	10 U	17 U
dichlorodifluoromethane	75-71-8	10 U	49 U
chloromethane	74-87-3	10 U	21 U
Freon-114	76-14-2	10 U	70 U
vinyl chloride	75-01-4	10 U	26 U
1,3-butadiene	106-99-0	10 U	22 U
bromomethane	74-83-9	10 U	39 U
chloroethane	75-00-3	10 U	26 U
vinyl bromide	593-60-2	10 U	44 U
acetone	67-64-1	2500 E	6000 E
trichlorofluoromethane	75-69-4	330	1900
isopropanol	67-63-0	20 U	49 U
1,1-dichioroethene	75-35-4	10 U	40 U
methylene chloride	75-09-2	20 U	69 U
3-chloropropene	107-05-1	10 U	31 U
carbon disulfide	75-15-0	10 U	31 U
Freon-113	76-13-1	10 U	77 U
trans-1,2-dichloroethene	156-60-5	10 U	40 U
1,1-dichloroethane	75-34-3	10 U	40 U
MTBE	1634-04-4	10 U	36 U
vinyl acetate	108-05-4	10 U	35 ∪
2-butanone (MEK)	78-93-3	24	71
cis-1,2-dichloroethene	156-59-2	10 U	40 U
n-hexane	110-54-3	10 U	35 U
chloroform	67-66-3	10 U	49 U
ethyl acetate	141-78-6	10 U	36 U
tetrahydrofuran	109-99-9	10 U	29 U
1,2-dichloroethane	107-06-2	10 U	40 U
1,1,1-trichloroethane	71-55-6	10 U	55 U
benzene	71-43-2	64	210
carbon tetrachloride	56-23-5	10 U	63 U
cyclohexane	110-82-7	300	1000
1,2-dichloropropane	78 -8 7-5	10 U	46 U
bromodichloromethane	75-27-4	10 U	67 U
2,2,4-trimethylpentane	540-84-1	65	310
1,4-dioxane	123-91-1	10 U	36 U
n-heptane	142-82-5	1200 E	4900 E
trichloroethene	79-01-6	36	200
cis-1,3-dichloropropene	10061-01-5	10 U	45 U
MIBK	108-10-1	79	330
trans-1,3-dichloropropene	10061-02-6	10 U	45 U
1,1,2-trichloroethane	79-00-5	10 U	55 U
toluene	108-88-3	2700 E	10000 E
2-hexanone	591-78-6	10 U	41 U
dibromochloromethane	124-48-1	10 U	85 U
1,2-dibromoethane	106-93-4	10 U	77 U

U = undetected at specified reporting limit

Client:		Crow Landfill	Lab Sample ID:	06-061-4 20X	Client Sample ID:	WELL EW 1
Laboratory ID:	06-061		Data File ID:	031406_13.D	Date Sampled:	3/8/06
Date Receiv ed:	3/9/06		Dilution Factor:	20	Date & Time Analyzed:	16 Mar 2006 8:22 am

Compound	CAS#	ppbV	ug/m³
tetrachloroethene	127-18-4	30	200
chlorobenzene	108-90-7	70	320
ethylbenzene	100-41-4	770	3300
p & m-xylene	106-42-3 & 108-38-3	840	3600
bromoform	75-25-2	10 U	100 U
styrene	100-42-5	31	130
1,1,2,2-tetrachloroethane	79-34-5	10 U	69 U
o-xylene	95-47-6	290	1300
4-ethyl toluene	622-96-8	110	510
1.3,5-trimethylbenzene	108-67-8	92	450
1,2,4-trimethylbenzene	95-63-6	180	890
benzyl chloride	100-44-7	10 U	52 U
1,3-dichlorobenzene	541-73-1	10 U	60 U
1,4-dichlorobenzene	106-46-7	14	85
1,2-dichlorobenzene	95-50-1	10 U	60 U
1,2,4-trichlorobenzene	120-82-1	10 U	74 U
hexachlorobutadiene	87-68-3	10 U	110 U

TENTATIVELY IDENTIFIED COMPOUNDS

Client:		Crow Landfill	Lab Sample ID:	06-061-4 20X	Client Sample ID:	WELL EW 1
Laboratory ID:	06-061		Data File ID:	031406_13.D	Date Sampled:	3/8/06
Date Received:	3/9/06		Dilution Factor:	20	Date & Time Analyzed:	16 Mar 2006 8:22 am

Compound	RT (min)	CAS#	Estimated ppbV
unknown methyl cyclohexane unknown unknown C ₉ H ₁₈ hydrocarbon n-nonane unknown C ₉ H ₁₈ hydrocarbon propyl cyclohexane alpha pinene beta pinene decane	12.87	N/A	170
	22.17	108-87-2	130
	25.22	N/A	190
	27.88	N/A	130
	28.06	111-84-2	300
	28.39	N/A	130
	28.92	1678-92-8	120
	29.07	7785-70-8	2000
	30.01	127-91-3	200
	30.27	124-18-5	190

Client:_		Crow Landfill	Lab Sample iD:	06-061-5 20X	Client Sample ID:	WELL TEW 2
Laboratory ID:	06-061		Data File ID:	031406_14.D	Date Sampled:	3/8/06
Date Received:	3/9/06		Dilution Factor:	20	Date & Time Analyzed:	16 Mar 2006 12:21 pm

Compound	CAS#	ppbV	ug/m³
propylene	115-7-1	10 U	17 U
dichlorodifluoromethane	75-71-8	10 U	49 U
chloromethane	74-87-3	10 U	21 U
Freon-114	76-14-2	10 U	70 U
vinyl chloride	75-01-4	10 U	26 U
1,3-butadiene	106-99-0	10 U	22 U
bromomethane	74-83-9	10 U	39 U
chloroethane	75-00-3	10 U	26 U
vinyl bromide	593-60-2	10 U	44 U
acetone	67-64-1	1700 E	4000 E
trichlorofluoromethane	75-69-4	53	300
isopropanol	67-63-0	20 U	49 U
1.1-dichloroethene	75-35-4	10 U	40 U
methylene chloride	75-09-2	20 U	69 U
3-chloropropene	107-05-1	19	59
carbon disulfide	75-15-0	10 U	31 U
Freon-113	76-13-1	10 U	77 U
rans-1,2-dichloroethene	156-60-5	10 U	40 U
1.1-dichloroethane	75-34-3	10 U	40 U
MTBE	1634-04-4	10 U	36 U
rinyl acetate	108-05-4	10 U	35 U
2-butanone (MEK)	78-93-3	10 U	29 U
cis-1,2-dichloroethene	156-59-2	10 U	40 U
n-hexane	110-54-3	1200 E	4100 E
hloroform	67-66-3	10 U	49 U
thyl acetate	141-78-6	10 U	36 U
etrahydrofuran	109-99-9	10 U	29 U
.2-dichloroethane	107-06-2	10 U	40 U
.1,1-trichloroethane	71-55-6	10 U	55 U
enzene	71-43-2	180	580
arbon tetrachloride	56-23-5	10 U	63 U
yclohexane	110-82-7	420	1400
2-dichloropropane	78-87-5	10 U	46 U
romodichloromethane	75-27-4	10 U	67 U
2,4-trimethylpentane	540-84-1	200	940
4-dioxane	123-91-1	10 U	36 ∪
heptane	142-82-5	1500 E	6000 E
chloroethene	79-01-6	32	170
s-1,3-dichloropropene	10061-01-5	10 U	45 U
IBK	108-10-1	83	340
ins-1,3-dichloropropene	10061-02-6	10 U	45 U
1,2-trichloroethane	79-00-5	23	120
uene	108-88-3	1400 E	5300 E
nexanone	591-78-6	10 U	41 U
promochloromethane	124-48-1	10 U	85 U
?-dibromoethane	106-93-4	10 U	77 U

U = undetected at specified reporting limit

Client:		Crow Landfill	Lab Sample ID: _	06-061-5 20X	Client Sample ID:	WELL TEW 2
Laboratory ID:	06-061		Data File ID:	031406_14.D	Date Sampled:	3/8/06
Date Received:	3/9/06		Dilution Factor:	20	Date & Time Analyzed:	16 Mar 2006 12:21 pm

Compound	CAS#	ppbV	ug/m³
tetrachioroethene	127-18-4	31	210
chiorobenzene	108-90-7	230	1000
ethylbenzene	100-41-4	360	1600
p & m-xylene	106-42-3 & 108-38-3	440	1900
bromoform	75-25-2	10 U	100 U
styrene	100-42-5	10 U	43 U
1,1,2,2-tetrachloroethane	79-34-5	10 U	69 U
o-xylene	95-47-6	120	530
4-ethyl toluene	622-96-8	42	200
1,3,5-trimethylbenzene	108-67-8	74	360
1,2,4-trimethylbenzene	95-63-6	73	360
benzyl chloride	100-44-7	10 U	52 U
1,3-dichlorobenzene	541-73-1	10 U	60 U
1,4-dichlorobenzene	106-46-7	30	180
1,2-dichlorobenzene	95-50-1	10 U	60 U
1,2.4-trichlorobenzene	120-82-1	10 U	74 U
hexachlorobutadiene	87-68-3	10 U	110 U

TENTATIVELY IDENTIFIED COMPOUNDS

Client:	Crow Landfill	Lab Sample ID:	06-061-5 20X	Client Sample ID:	WELL TEW 2
Laboratory ID:	06-061	Data File ID:	031406_14.D	Date Sampled:	3/8/06
Date Received:	3/9/06	Dilution Factor:	20	Date & Time Analyzed:	16 Mar 2006 12:21 pm

Compound	RT (min)	CAS#	Estimated ppbV
methyl cyclohexane unknown C ₈ H ₁₆ hydrocarbon 1,1,3-trimethylbenzene 3-methyl octane unknown unknown unknown 2,6-dimethyl octane unknown	21.48 24.20 26.37 27.31 27.83 28.35 28.69 28.90 29.64 30.12	108-87-2 N/A 3073-66-3 2216-33-3 N/A N/A 2051-30-1 N/A 526-73-7	2100 350 320 400 370 300 510 920 290 310

Client:	Crow Landfill	Lab Sample ID:	06-061-6 20X	Client Sample ID:	INLET FLARE
Laboratory ID:	06-061	Data File ID:	031406_15.D	Date Sampled:	3/8/06
Date Received:	3/9/06	Dilution Factor:	20	Date & Time Analyzed:	16 Mar 2006 1:09 pm

Compound	CAS#	ppbV	ug/m³
propylene	115-7-1	10 U	17 U
dichlorodifluoromethane	75-71-8	10 U	49 U
chloromethane	74-87-3	11	23
Freon-114	76-14-2	10 U	70 U
vinyl chloride	75-01-4	10 U	26 U
1,3-butadiene	106- 99- 0	10 U	22 U
bromomethane	74-83-9	10 U	39 U
chloroethane	75-00-3	42	110
vinyl bromide	593-60-2	10 U	44 U
acetone	67-64-1	20 U	48 U
trichlorofluoromethane	75-69-4	1700 E	9700 E
isopropanol	67-63-0	20 U	49 U
1,1-dichloroethene	75-35-4	10 U	40 U
methylene chloride	75-09-2	20 U	69 U
3-chloropropene	107-05-1	10 U	31 U
carbon disulfide	75-15-0	10 U	31 U
Freon-113	76-13-1	10 U	77 U
trans-1,2-dichloroethene	156-60-5	10 U	40 U
1,1-dichloroethane	75-34-3	10 U	40 U
MTBE	1634-04-4	10 U	36 U
vinyl acetate	108-05-4	10 U	35 U
2-butanone (MEK)	78-93-3	130	370
cis-1,2-dichloroethene	156-59-2	10 U	40 U
n-hexane	110-54-3	10 U	35 U
chloraform	67-66-3	10 U	49 U
ethyl acetate	141-78-6	10 U	36 U
tetrahydrofuran	109-99-9	44	130
1,2-dichloroethane	107-06-2	10 U	40 U
1,1,1-trichloroethane	71-55-6	10 U	55 U
benzene	71-43-2	190	620
carbon tetrachloride	56-23- 5	10 U	63 U
cyclohexane	110-82-7	440	1500
1,2-dichloropropane	78-87-5	10 U	46 U
bromodichloromethane	75-27-4	10 U	67 ป
2,2,4-trimethylpentane	540-84-1	130	610
1,4-dioxane	123-91-1	10 U	36 U
n-heptane	142-82-5	1800 E	7500 E
trichloroethene	79-01-6	58	310
cis-1,3-dichloropropene	10061-01-5	10 U	45 U
MIBK	108-10-1	210	850
rans-1,3-dichloropropene	10061-02-6	10 U	45 U
1,1,2-trichloroethane	79-00-5	10 U	55 U
oluene	108-88-3	2500 E	9300 E
2-hexanone	591-78-6	10 U	41 U
fibromochloromethane	124-48-1	10 U	85 U
1,2-dibromoethane	106-93-4	10 U	77 U

U = undetected at specified reporting limit

Client:	Crow Landfill	Lab Sample ID:	06-061-6 20X	Client Sample ID:	INLET FLARE
Laboratory (D:	06-061	Data File ID:	031406_15.D	Date Sampled:	3/8/06
Date Received:	3/9/06	Dilution Factor:	20	Date & Time Analyzed:	16 Mar 2006 1:09 pm

Compound	CAS#	ppbV	ug/m³
tetrachloroethene	127-18-4	58	390
chlorobenzene	108-90-7	140	660
ethylbenzene	100-41-4	880	3800
p & m-xylene	106-42-3 & 108-38-3	1100	4900
bromoform	75-25-2	10 U	100 U
styrene	100-42-5	10 U	43 U
1,1,2,2-tetrachloroethane	79-34-5	10 U	69 U
o-xylene	95-47-6	290	1300
4-ethyl toluene	622-96-8	92	450
1,3,5-trimethylbenzene	108-67-8	90	440
1.2,4-trimethylbenzene	95-63-6	230	1100
benzyl chloride	100-44-7	10 U	. 52 U
1,3-dichlorobenzene	541-73-1	10 U	60 U
1,4-dichlorobenzene	106-46-7	27	170
1,2-dichlorobenzene	95-50-1	10 U	60 U
1,2,4-trichlorobenzene	120-82-1	10 U	74 U
hexachlorobutadiene	87-68-3	10 U	110 U

TENTATIVELY IDENTIFIED COMPOUNDS

Client:		Crow Landfill	Lab Sample ID:	06-061-6 20X	Client Sample ID:	INLET F	LARE
Laboratory ID:	06-061		Data File ID:	031406_15.D	Date Sampled:	3/8/0	6
Date Received:	3/9/06		Dilution Factor:	20	Date & Time Analyzed:	16 Mar 2006	1:09 pm

Compound	RT (min)	CAS#	Estimated ppbV
methyl cyclohexane unknown C _g H ₁₆ hydrocarbon 3-methyl octane unknown n-nonane unknown C _g H ₁₈ hydrocarbon 2-6-dimethyl octane propyl-cyclohexane alpha pinene unknown aliphatic hydrocarbon	22.12	108-87-2	300
	24.50	N/A	160
	27.36	2216-33-3	180
	27.88	N/A	170
	28.04	111-84-2	210
	28.38	N/A	160
	28.90	2051-30-1	220
	28.90	1678-92-8	200
	28.92	7785-70-8	1000
	29.05	N/A	170

Client:	Crow Landfill	Lab Sample ID:	06-061-7	Client Sample ID:	BLANK
Laboratory ID:	06-061	Data File ID:	031406_08.D	Date Sampled:	3/8/06
Date Received:	3/9/06	Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 3:24 am

Compound	CAS#	ppbV	ug/m³
propylene	115-7-1	0.50 U	
dichlorodifluoromethane	75-71-8	0.50 U	0.86 U
chloromethane	74-87-3	0.50 U	2.5 U
Freon-114	76-14-2	0.50 U	1.0 U
vinyl chloride	75-01-4	0.50 U	3.5 U
1,3-butadiene	106-99-0	i !	1.3 U
bromomethane	74-83-9	0.50 U	1.1 U
chloroethane	75-00-3	0.50 U	1.9 U
vinyl bromide	593-60-2	0.50 U	1.3 U
acetone	67-64-1	0.50 U	2.2 U
trichlorofluoromethane	75-69-4	1.0 U	2.4 U
isopropanol	67-63-0	0.50 ∪	2.8 U
1,1-dichloroethene	75-35-4	1.0 U	2.5 U
methylene chloride	75-09-2	0.50 ∪	2.0 U
3-chloropropene	107-05-1	1.0 U	3.5 U
carbon disulfide	75-15-0	0.50 U	1.6 U
Freon-113	į	0.50 U	1.6 U
rans-1,2-dichloroethene	76-13-1	0.50 U	3.8 U
1,1-dichloroethane	156-60-5	0.50 U	2.0 U
MTBE	75-34-3	0.50 U	2.0 U
inyl acetate	1634-04-4	0.50 U	1.8 U
-butanone (MEK)	108-05-4	0.50 U	1.8 U
is-1,2-dichloroethene	78-93-3	0.50 U	1.5 U
-hexane	156-59-2	0.50 U	2.0 U
hloroform	110-54-3	0.50 U	1.8 U
thyl acetate	67-66-3	0.50 U	2.4 U
etrahydrofuran	141-78-6	0.50 U	1.8 U
2-dichloroethane	109-99-9	0.50 U	1.5 U
1,1-trichloroethane	107-06-2	0.50 ∪	2.0 U
enzene	71-55-6	0.50 U	2.7 U
	71-43-2	0.50 U	1.6 U
irbon tetrachloride clohexane	56-23-5	0.50 U	3.1 U
	110-82-7	0.50 U	1.7 U
2-dichloropropane	78-87-5	0.50 U	2.3 U
omodichloromethane	75-27-4	0.50 U	3.4 U
2,4-trimethylpentane	540-84-1	0.50 U	2.3 U
l-dioxane	123-91-1	0.50 U	1.8 U
eptane	142-82-5	0.50 U	2.0 U
hloroethene	79-01-6	0.50 U	2.7 U
-1,3-dichloropropene	10061-01-5	0.50 U	**
3K	108-10-1	0.50 U	2.3 U
is-1.3-dichloropropene	10061-02-6	0.50 U	2.0 U
2-trichloroethane	79-00-5	0.50 U	2.3 U
ene	108-88-3	0.50 U	2.7 U
exanone	591-78-6	:	1.9 U
omochloromethane	124-48-1	0.50 U	2.0 U
dibromoethane	106-93-4	0.50 U	4.3 U

Client:		Crow Landfill	Lab Sample ID:	06-061-7	Client Sample ID:	BLAN	K
Laboratory ID:	06-061		Data File ID:	031406_08.D	Date Sampled:	3/8/06	
Date Received:	3/9/06		Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 3	3:24 am

Compound	CAS#	ppbV	ug/m³
tetrachloroethene	127-18-4	0.50 U	3.4 U
chlorobenzene	108-90-7	0. 50 U	2.3 U
ethylbenzene	100-41-4	0. 50 U	2.2 U
p & m-xylene	106-42-3 & 108-38-3	1.0 U	4.3 U
bromoform	75-25-2	0. 50 U	5.2 U
styrene	100-42-5	0. 50 U	2.1 ∪
1,1,2,2-tetrachloroethane	79-34-5	0.5 0 U	3.4 U
o-xylene	95-47-6	0.50 U	2.2 U
4-ethyl toluene	622-96-8	0.50 U	2.5 U
1,3,5-trimethylbenzene	108-67-8	0.50 U	2.5 U
1,2,4-trimethylbenzene	95-63-6	0. 50 U	2.5 U
benzyl chloride	100-44-7	0. 50 U	2.6 ∪
1,3-dichlorobenzene	541-73-1	0.50 U	3.0 U
1,4-dichlorobenzene	106-46-7	0.50 U	3.0 U
1,2-dichlorobenzene	95-50-1	0.50 U	3.0 U
1,2,4-trichlorobenzene	120-82-1	0.50 U	3.7 U
hexachlorobutadiene	87-68-3	0.50 U	5.3 ป

TENTATIVELY IDENTIFIED COMPOUNDS

Client:	and the second s	06-061	Lab Sample ID:	06-061-7	Client Sample ID:	BLAN	
Laboratory ID:	06-061		Data File ID:	031406_08.D	Date Sampled:	3/8/06	
Date Received:	3/9/06		Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 3	:24 am

Compound	RT (min)	CAS#	Estimated ppbV
No tentatively identified compounds			

ENSR AIR TOXICS SPECIALTY LABORATORY QUALITY CONTROL RESULTS-METHOD BLANK

Client:		Crow Landfill	Lab Sample ID:	METHOD BLANK	Client Sample ID:	N/A	
Laboratory ID:	06-061		Data File ID:	031406_07.D	Date Sampled:	N/A	
Date Received:	N/A		Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 1:18 a	am

Compound	CAS#	ppbV	ug/m³
propylene	115-7-1	0.50 U	0.86 U
dichlorodifluoromethane	75-71-8	0.50 U	2.5 U
chloromethane	74-87-3	0.50 U	1.0 U
Freon-114	76-14-2	0.50 U	3.5 U
vinyl chloride	75-01-4	0.50 U	1.3 U
1,3-butadiene	106-99-0	0.50 U	1.1 U
bromomethane	74-83-9	0.50 U	1.9 U
chloroethane	75-00-3	0.50 U	1.3 U
vinyl bromide	593-60-2	0.50 U	2.2 U
acetone	67-64-1	1.0 U	2.4 U
trichlorofluoromethane	75-69-4	0.50 U	2.8 U
isopropanol	67-63-0	1.0 U	2.5 U
1,1-dichloroethene	75-35-4	0.50 U	2.0 U
methylene chloride	75-09-2	1.0 U	3.5 U
3-chloropropene	107-05-1	0.50 U	1.6 U
carbon disulfide	75-15-0	0.50 U	1.6 U
Freon-113	76-13-1	0.50 U	3.8 U
trans-1,2-dichloroethene	156-60-5	0.50 U	2.0 U
1,1-dichloroethane	75-34-3	0.50 U	2.0 U
MTBE	1634-04-4	0.50 U	1.8 U
vinyl acetate	108-05-4	0.50 U	1.8 U
2-butanone (MEK)	78-93-3	0.50 U	1.5 U
cis-1,2-dichloroethene	156-59-2	0.50 U	2.0 U
n-hexane	110-54-3	0.50 ∪	1.8 U
chloroform	67-66-3	0.50 ป	2.4 U
ethyl acetate	141-78-6	0.50 U	1.8 U
tetrahydrofuran	109-99-9	0.50 U	1.5 U
1,2-dichloroethane	107-06-2	0.50 U	2.0 U
1,1,1-trichloroethane	71-55-6	0.50 U	2.7 U
benzene	71-43-2	0.50 ∪	1.6 U
carbon tetrachloride	56-23-5	0.50 U	3.1 U
cyclohexane	110-82-7	0.50 U	1.7 U
1,2-dichloropropane	78-87-5	0.50 U	2.3 U
bromodichloromethane	75-27-4	0.50 U	3.4 U
2,2,4-trimethylpentane	540-84-1	0.50 U	2.3 U
1,4-dioxane	123-91-1	0.50 U	1.8 U
n-heptane	142-82-5	0.50 U	2.0 U
trichloroethene	79-01-6	0.50 U	2.7 U
cis-1,3-dichloropropene	10061-01-5	0.50 U	2.3 U
MIBK	108-10-1	0.50 U	2.0 U
trans-1,3-dichloropropene	10061-02-6	0.50 U	2.3 U
1,1,2-trichloroethane	79-00-5	0.50 U	2.7 U
toluene	108-88-3	0.50 U	1.9 U
2-hexanone	591-78-6	0.50 U	2.0 U
dibromochloromethane	124-48-1	0.50 U	4.3 U
1,2-dibromoethane	106-93-4	0.50 U	3.8 U

ENSR AIR TOXICS SPECIALTY LABORATORY QUALITY CONTROL RESULTS-METHOD BLANK

Client:		Crow Landfill	Lab Sample ID:	METHOD BLANK	Client Sample ID:	N/A
Laboratory ID:	06-061		Data File ID:	031406_07.D	Date Sampled:	N/A
Date Received:	N/A		Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 1:18 am

Compound	CAS#	ppbV	ug/m³
tetrachloroethene	127-18-4	0.50 U	3.4 U
chlorobenzen e	108-90-7	0.50 U	2.3 U
ethylbenzene	100-41-4	0.50 U	2.2 U
p & m-xylene	106-42-3 & 108-38-3	1.0 U	4.3 U
bromoform	75-25-2	0.50 U	5.2 U
styrene	100-42-5	0.50 U	2.1 U
1,1,2,2-tetrachioroethane	79-34-5	0.50 U	3.4 U
o-xylene	95-47-6	0.50 U	2.2 U
4-ethyl toluene	622-96-8	0.50 U	2.5 U
1,3,5-trimethylbenzene	108-67-8	0.50 U	2.5 U
1,2,4-trimethylbenzene	95-63-6	0.50 U	2.5 U
benzyl chloride	100-44-7	0.50 U	2.6 U
1,3-dichlorobenzene	541-73-1	0.50 U	3.0 U
1,4-dichlorobenzene	106-46-7	0.50 U	3.0 U
1,2-dichlorobenzene	95-50-1	0.50 U	3.0 U
1,2,4-trichlorobenzene	120-82-1	0.50 U	3.7 U
hexachlorobutadiene	87-68-3	0.50 U	5.3 U

Client:		Crow Landfill	Lab Sample ID:	METHOD BLANK	Client Sample ID:	N/A	
Laboratory ID:	06-061		Data File ID:	031406_07.D	Date Sampled:	N/A	
Date Received:	N/A		Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006	1:18 am

Compound	RT (min)	CAS#	Estimated ppbV
No tentatively identified compounds			

ENSR AIR TOXICS SPECIALTY LABORATORY QUALITY CONTROL RESULTS-LABORATORY CONTROL SPIKE

Client:	Crow Landfill	Lab Sample ID:	5.0 TO15 LCS	Client Sample ID:	N/A
Laboratory ID:	06-061	Data File ID:	031406_04.D	Date Sampled:	N/A

 Date Received:
 N/A
 Dilution Factor:
 1.0
 Date & Time Analyzed:
 15 Mar 2006 11:13 pm

Compound	ppbV	ug/m³	True Value ppbV	% Recovery	Control Limits
dichlorodifluoromethane	3.8	19	5.0	76%	70-130%
chloromethane	3.7	7.6	5.0	73%	70-130%
Freon-114	4.0	28	5.0	79%	70-130%
vinyl chloride	3.9	9.9	5.0	77%	70-130%
bromomethane	3.6	14	5.0	71%	70-130%
chloroethane	3.5	9.3	5.0	70%	70-130%
trichlorofluoromethane	3.9	22	5.0	78%	70-130%
1,1-dichloroethene	4.0	16	5.0	80%	70-130%
methylene chloride	3.6	12	5.0	71%	70-130%
Freon-113	3.7	28	5.0	73%	70-130%
1,1-dichloroethane	4.0	16	5.0	79%	70-130%
cis-1,2-dichloroethene	4.1	16	5.0	82%	70-130%
chloroform	3.9	19	5.0	78%	70-130%
1,2-dichloroethane	3.7	15	5.0	73%	70-130%
1,1,1-trichloroethane	4.0	22	5.0	80%	70-130%
benzene	4.0	13	5.0	81%	70-130%
carbon tetrachloride	4.1	26	5.0	81%	70-130%
1,2-dichloropropane	3.9	18	5.0	78%	70-130%
trichloroethene	3.9	21	5.0	77%	70-130%
cis-1,3-dichloropropene	4.1	19	5.0	83%	70-130%
trans-1,3-dichloropropene	3.9	18	5.0	77%	70-130%
1,1,2-trichloroethane	3.9	21	5.0	77%	70-130%
toluene	3.6	14	5.0	73%	70-130%
1,2-dibromoethane	3.7	29	5.0	75%	70-130%
tetrachloroethene	3.9	26	5.0	78%	70-130%
chlorobenzene	3.9	18	5.0	79%	70-130%
ethylbenzene	3.9	17	5.0	78%	70-130%
p & m-xylene	7.6	33	10	76%	70-130%
styrene	3.7	16	5.0	75%	70-130%
1,1,2,2-tetrachloroethane	4.1	28	5.0	82%	70-130%
o-xylene	3.5	15	5.0	71%	70-130%
1,3,5-trimethylbenzene	4.0	20	5.0	81%	70-130%
1,2,4-trimethylbenzene	3.7	18	5.0	74%	70-130%
1,3-dichlorobenzene	3.7	22	5.0	74%	70-130%
1,4-dichlorobenzene	3.6	21	5.0	71%	70-130%
1,2-dichlorobenzene	3.9	23	5.0	78%	70-130%
1,2,4-trichlorobenzene	3.5	26	5.0	70%	70-130%
hexachlorobutadiene	4.2	44	5.0	83%	70-130%

ENSR AIR TOXICS SPECIALTY LABORATORY QUALITY CONTROL RESULTS-DUPLICATE ANALYSES

Client:	Crow Landfill	Lab Sample IDs:	06-061-1	06-061-1 DUP	Client Sample ID:	AMB-1
		·				

Laboratory ID: 06-061 Data File IDs: 031406_09.D 031406_10.D

Dilution Factor: 1.0 Date & Time Analyzed: 16 Mar 2006 4:27 am 16 Mar 2006 5:29 am

Compound	CAS#	ppbV	ppbV DUP	% RPD
propylene	115-7-1	0.50 U	0.50 U	NC NC
dichlorodifluoromethane	75-71-8	0.50 U	0.50 U	NC
chloromethane	74-87-3	0.50 U	0.50 U	NC
Freon-114	76-14-2	0.50 U	0.50 U	NC
vinyl chloride	75-01-4	0.50 U	0.50 U	NC
1.3-butadiene	106-99-0	0.50 U	0.50 U	NC
bromomethane	74-83-9	0.50 U	0.50 U	NC
chloroethane	75-00-3	0.50 U	0.50 U	NC
vinyl bromide	593-60-2	0.50 U	0.50 U	NC
acetone	67-64-1	1.0 U	1.0 U	NC
trichlorofluoromethane	75-69-4	0.50 U	0.50 U	NC
isopropanol	67-63-0	1.0 U	1.0 U	NC
1,1-dichloroethene	75-35-4	0.50 U	0.50 U	NC
methylene chloride	75-09-2	1.0 U	1.0 U	NC
3-chloropropene	107-05-1	0.50 U	0.50 U	NC
carbon disulfide	75-15-0	0.50 U	0.50 U	NC
Freon-113	76-13-1	0.50 U	0.50 U	NC
trans-1,2-dichloroethene	156-60-5	0.50 U	0.50 U	NC
1,1-dichloroethane	75-34-3	0.50 U	0.50 U	NC
MTBE	1634-04-4	0.50 U	0.50 U	NC
vinyl acetate	108-05-4	0.50 U	0.50 U	NC
2-butanone (MEK)	78-93-3	0.50 U	0.50 U	NC
cis-1,2-dichloroethene	156-59-2	0.50 ∪	0.50 U	NC
n-hexane	110-54-3	0.50 ∪	0.50 U	NC
chloroform	67-66-3	0.50 U	0.50 U	NC
ethyl acetate	141-78-6	0.50 U	0.50 U	NC
tetrahydrofuran	109-99-9	0.50 U	0.50 U	NC
1,2-dichloroethane	107-06-2	0.50 U	0.50 U	NC
1,1,1-trichloroethane	71-55-6	0.50 U	0.50 U	NC
benzene	71-43-2	0.50 U	0.50 U	NC
carbon tetrachloride	56-23-5	0.50 U	0.50 U	NC
cyclohexane	110-82-7	0.50 U	0.50 U	NC
1,2-dichloropropane	78-87-5	0.50 U	0.50 U	NC
bromodichloromethane	75-27-4	0.50 U	0.50 U	NC
2,2,4-trimethylpentane	540-84-1	0.50 U	0.50 U	NC
1,4-dioxane	123-91-1	0.50 U	0.50 U	NC
n-heptane	142-82-5	0.50 U	0.50 U	NC
trichloroethene	79-01- 6	0.50 U	0.50 U	NC
cis-1,3-dichloropropene	10061-01-5	0.50 U	0.50 U	NC NC
MIBK	108-10-1	0.50 U	0.50 U	NC
trans-1,3-dichloropropene	10061-02-6	0.50 U	0.50 U	NC
1,1,2-trichloroethane	79-00-5	0.50 U	0.50 U	NC
toluene	108-88-3	0.50 U	0.50 U	NC
2-hexanone	591-78-6	0.50 U	0.50 U	NC
dibromochloromethane	124-48-1	0.50 U	0.50 ∪	NC
1,2-dibromoethane	106-93-4	0.50 U	0.50 U	NC

U = undetected at specified reporting limit

B = analyte found in blank

ENSR AIR TOXICS SPECIALTY LABORATORY QUALITY CONTROL RESULTS-DUPLICATE ANALYSES

Client:	Crow Landfill	Lab Sample IDs:	06-061-1	06-061-1 DUP	Client Commit 177	
***************************************				00-001-1 DOF	Client Sample ID:	AMB-1

Laboratory ID: 06-061 Data File IDs: 031

Data File IDs: 031406_09.D 031406_10.D

Dilution Factor: 1.0 Date & Time Analyzed: 16 Mar 2006 4:27 am 16 Mar 2006 5:29 am

Compound	CAS#	ppbV	ppbV DUP	% RPD
tetrachloroethene	127-18-4	0.50 U	0.50 U	NC NC
chlorobenzene	108-90-7	0.50 U	0.50 U	NC
ethylbenzene	100-41-4	0.50 U	0.50 U	NC
p & m-xylene	106-42-3 & 108-38-3	1.0 U	1.0 U	NC
bromoform	75-25-2	0.50 U	0.50 U	NC
styrene	100-42-5	0.50 U	0.50 U	NC
1,1,2,2-tetrachloroethane	79-34-5	0.50 U	0.50 U	NC
o-xylene	95-47-6	0.50 U	0.50 U	NC
4-ethyl toluene	622-96-8	0.50 U	0.50 U	NC
1,3,5-trimethylbenzene	108-67-8	0.50 U	0.50 U	NC
1,2,4-trimethy/benzene	95-63-6	0.50 U	0.50 U	NC
benzyl chlorid e	100-44-7	0.50 U	0.50 U	NC
1.3-dichlorobenzene	541-73-1	0.50 U	0.50 U	NC
1,4-dichlorobenzene	106-46-7	0.50 U	0.50 U	NC
1,2-dichlorobenzene	95-50-1	0.50 U	0.50 U	NC '
1,2,4-trichlorobenzene	120-82-1	0.50 U	0.50 U	NC
hexachlorobutadiene	87-68-3	0.50 U	0.50 U	NC

www.ensr.com Page of Remarks Analysis Requested RUSH (only pre-approved jobs guaranteed) 3 190 90 28 (1981.D. (i.e., special reporting fimits needed, billing informati Turn-Around Time: Standard 10-day WESTERN DOLL MA Notes: Pink: Sampler Chain of Custody Tape No.: Date: The Control Time: // i Time: ≫(A) **CHAIN OF CUSTODY RECORD** Time: Date: Regulator LD. Date Location: Email: Yellow: Lab Raw LAND CANGELL Received for laboratogy by: (print name) 100 A 3450 38X 80 N Capister 10. 120000 White: Original (to Lab) Received by: (print name) Received by: (print name) Sample Container (Can/Bag) Send Results/Report to: て な り Signature: / Field Logbook No.: Signature: Signature: Project Name: Совър Grab اربيه! خمصور Date: Time: Time: Date: <u>~</u> 4 30.02 /4 /4 Signature: 1 (27) CAS (ETAS R. 1 reld Sample 80.1 Data Time ENSR Air Laboratory 325 Ayer Rd Harzard, MA 01451-1132 Prone. 1978; 772-2345 Fax. (978) 772-4956 COLAR COL 637 white the was the to prove Sampler: (Print Name):(Affiliation) BAKERSON Relinquished by: (print name) Relinquished by: (print name) (priot name) 0.000 といれたとど Project Number: Relinquished by: WELL Signature; Signature: Signature: Client page 32 of 33

SAMPLE LOG-IN & RECEIPT CHECKLIST

Client/Proj#_Cow	lare	Landfill/1	0736-0	56/	
Project Mgr: Sta	re who	ght		ab Pool # 06	-061
Inspected & Logged in				Time: 3/9/0	
Sample Matrix	Number of Samples	Analysis Requested	Hold Time & Due by(date)	Storage Location	Disposal
Tealor Bogs	6	surfurcomes via mismad	HT. 3/11/06	actain	Date*
Summa cais	7	70-15+ 10-71cs	HT:4 6106	Balms lab	
			HT:		
1) Shipped / Hand delive 2) COC present / not proceed and present / samples broken / less 5) Samples ambient / coc samples preserved within / out 6) COC tapes present / coc tapes present	not present aking intachilled on recorrectly incorrectly incorrect	t on shipping cont t on receipt ceipt correctly / none re g time on samples	commended COCs and samp		
Note that all Canister samples wil					

*= Note that all Canister samples will be considered disposed of during next cleaning. For canister samples, please refer to Canister Log Book for details.

R:\Air_Tox\t.AB\t.ab forms\samplog.xla Last Revised 5/30/03

www.ensr.com Page of Remarks **Analysis Requested** RUSH (only pre-approved jobs guaranteed) Lab I.D. Notes: (i.e., special reporting limits needed, billing information) Turn-Around Time: Standard 10-day 4 Sample Type (Soil gas/ambient) Chain of Custody Tape No.: Pink: Sampler Time: Date: 78/66 **CHAIN OF CUSTODY RECORD** Regulator I.D. Time: Date: Time: Location: Date: Email: Yellow: Lab Received for laboratory by: (print name) Canister I.D. White: Original (to Lab) Received by: (print name) Received by: (print name) Sample Container (Can/Bag) Send Results/Report to: こない Field Logbook No.: Signature: Signature: Signature: Project Name: Comp Grab Date: Time: Time: Date: Time: Date: 75 20 かたく ()*** Time Y SSI 3 ENSR Air Laboratory 325 Ayer Rd Harvard, MA 01451-1132 Phone: (978) 772-2345 Fax: (978) 772-4956 Date Signature: Key Cabo Sampler: (Print Name)/(Affiliation) CENT 113 D. W. Colon Com. D. Samen Relinquished by: (print name) Relinquished by: (print name) Relinquished by: (print name) うろうううそん AND I 3 5 T Field Sample No./ Identification というという Project Number: Signature: Signature: Signature: Client:

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\

Data File : 031406_09.D

Acq On : 16 Mar 2006 4:27 am

Operator : AF

|\$ample : 06-061-1 |Misc : 500ML A217

Misc : 500ML A217 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 20 15:48:02 2006

Quant Method : C:\MSDCHEM\1\METHODS\T015012505B.M

Quant Title :

QLast Update : Fri Mar 10 09:59:33 2006 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units Dev(Min)
 Bromochloromethane 1,4-difluorobenzene chlorobenzene-d5 	19.39	114	672817 4078825 5108566	10.00 ppbV -0.10 10.00 ppbV -0.05 10.00 ppbV -0.02

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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TO15012505B.M Mon Mar 20 16:06:56 2006 RPT1

Sample Information

Run Information

Inlet Position: 4

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std. : Yes

Sample Type : Sample

Cryofocus : Yes

Analysis Type : Low Level

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

(QT Reviewed) Quantitation Report

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\

Data File : 031406_10.D

: 16 Mar 2006 5:29 am Acq On

Operator : AF

Sample : 06-061-1 DUP

Misc : 500ML A217 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 20 15:48:03 2006

Quant Method : C:\MSDCHEM\1\METHODS\T015012505B.M

Quant Title :

QLast Update : Fri Mar 10 09:59:33 2006 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units Dev	v(Min)
 Bromochloromethane 1,4-difluorobenzene chlorobenzene-d5 	19.38	114	637314 3765796 4415292	10.00 ppbV 10.00 ppbV 10.00 ppbV	-0.11 -0.07 -0.03

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Sample Information

Run Information

Inlet Position: 4

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std.: Yes

Sample Type : Sample

Cryofocus : Yes

Analysis Type : Low Level

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Data Path : C:\MSDCHEM\1\DATA\2006 FEB\031506\

Data File : 031406 11.D

Acq On : 16 Mar 2006 Operator : AF 6:32 am

: 06-061-2 Sample : 500ML B235 Misc

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 20 16:02:56 2006

Quant Method : C:\MSDCHEM\1\METHODS\TO15012505B.M

Quant Title :

QLast Update : Fri Mar 10 09:59:33 2006 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units Dev(Min)
 Bromochloromethane 1,4-difluorobenzene chlorobenzene-d5 			848396 4252793m 5347579	10.00 ppbV -0.10 10.00 ppbV -0.06 10.00 ppbV -0.02
Target Compounds				Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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DB .M Bromochloromethane,i		ў • •	22.00 24.00
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Sample Information

Run Information

Inlet Position : 5

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std. : Yes

Sample Type : Sample

Cryofocus : Yes

Analysis Type : Low Level

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\

Data File : 031406_12.D

Acq On : 16 Mar 2006 7:34 am

Operator : AF

| Sample : 06-061-3 | Misc : 500ML A230

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 20 16:03:18 2006

Quant Method: C:\MSDCHEM\1\METHODS\T015012505B.M

Quant Title :

Target Compounds

QLast Update : Fri Mar 10 09:59:33 2006 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units Dev(Min)
 Bromochloromethane 1,4-difluorobenzene chlorobenzene-d5 	14.93	128	842461m	10.00 ppbV -0.87
	18.91	114	4045005m	10.00 ppbV -0.54
	26.17	117	4354594	10.00 ppbV -0.12

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Q3/20/06

Qvalue

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Quant Method : C:\MSECHEM\1\METHODS\TO15012505B.M Bromochloromethane,i 14.00 C:\MSDCHEM\1\DATA\2006_FEB\031506\ TO15012505B.M Mon Mar 20 16:07:05 2006 RPT1 12.00 : Fri Mar 10 09:59:33 2006 : Initial Calibration Sample Multiplier: 1 10.00 7:34 am 8.00 031406_12.D 16 Mar 2006 AF 06-061-3 500ML A230 6.00 4.00 QLast Update Response via Title Data Path Data File : Operator ALS Vial Abundance 500000 450000 400000 350000 300000 250000 200000 150000 100000 50000 550000 Acq On Sample 650000 000009 Quant Time--> Misc

Quantitation Report

Sample Information

Run Information

Inlet Position: 6

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std.: Yes

Sample Type : Sample

Cryofocus: Yes

Analysis Type : Low Level

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Data Path : C:\MSDCHEM\1\DATA\2006 FEB\031506\

Data File : 031406 13.D

Acq On : 16 Mar 2006 Operator : AF 8:22 am

: 06-061-4 20X Sample : 25ML C135 Misc

ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 20 16:04:07 2006

Quant Method : C:\MSDCHEM\1\METHODS\T015012505B.M

Quant Title :

QLast Update : Fri Mar 10 09:59:33 2006 Response via : Initial Calibration

Internal Standards	R.T. QIon	Response Conc Units Dev(Min)	
1) Bromochloromethane 4) 1,4-difluorobenzene 7) chlorobenzene-d5	15.26 128 19.30 114 26.27 117	417255m 7 10.00 ppbV -0.53 2855963m 7 10.00 ppbV -0.14 5570010m 7 10.00 ppbV -0.02	
Target Compounds 3) vinyl acetate 6) MIBK	14.27 43 22.27 43	Qvalue 94866 1 <u>83263 ppbV #</u> 456077m 3.97265 ppbV	74Not good

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Time: Mar 20 16:04:07 2006
Quant Method: C:\MSDCHEM\1\METHODS\TO15012505B.M
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TO15012505B.M Mon Mar 20 16:07:06 2006 RPT1

Page: 2

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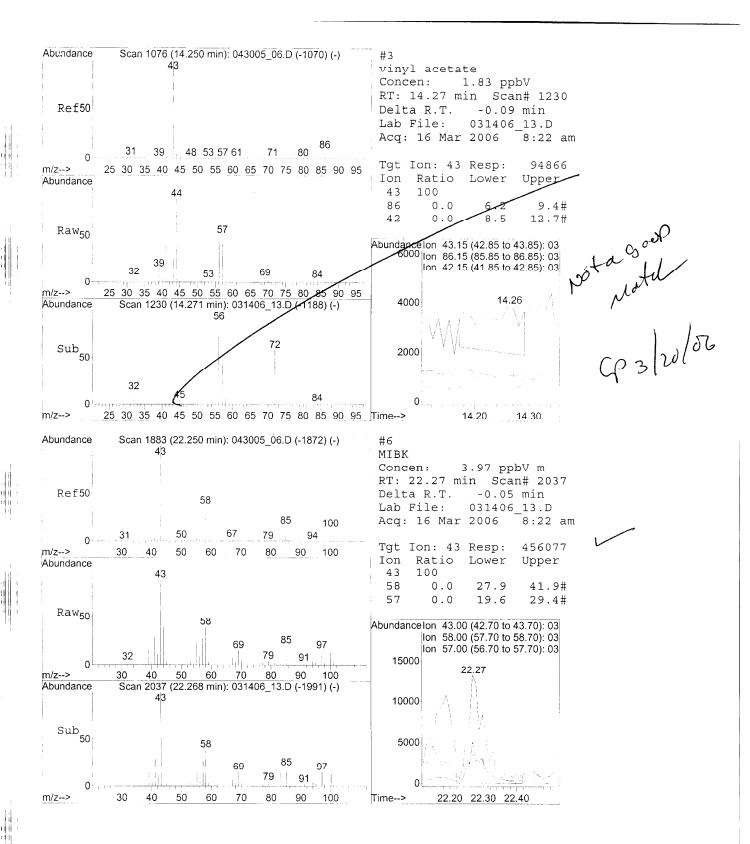
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Sample Information

Run Information

Sample Name: 061-4 C135 031506 13

Inject Time : 05:53:21

Inlet Position: 7

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std. : Yes

Sample Type : Sample

Cryofocus : Yes

Analysis Type : Low Level

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Data Path : C:\MSDCHEM\1\DATA\2006 FEB\031506\

Data File : 031406_14.D

Acq On : 16 Mar 2006 12:21 pm

Operator : AF

Sample : 06-061-5 20X |Misc : 25ML C141

ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 20 16:05:26 2006

Quant Method : C:\MSDCHEM\1\METHODS\T015012505B.M

Quant Title :

QLast Update : Fri Mar 10 09:59:33 2006

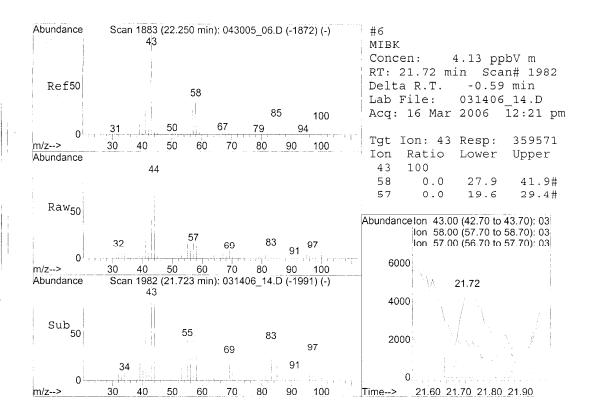
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units Dev(Min)
1) Bromochloromethane 4) 1,4-difluorobenzene 7) chlorobenzene-d5	18.26	114	2164402m	10.00 ppbV -2.57 10.00 ppbV -1.19 10.00 ppbV -0.18
Target Compounds 6) MIBK	21.72	43	359571m	Qvalue) 4.13278 ppbV

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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eport 1506\	Bromochloromethane,i	14.00 16.00
MSDCHEM\1\DATA\2006_FEB\031506 406_14.D Mar 2006 12:21 pm 061-5 20X IL C141 Sample Multiplier: 1 20 16:05:26 2006 C:\MSDCHEM\1\METHODS\T01501250 Fri Mar 10 09:59:33 2006 Initial Calibration	f^{*}	10.00 12.00 7:08 2006 RPT1
C:\MSDCHEM\1\DATA\2006_FEB\031506 031406_14.D 16 Mar 2006 12:21 pm AF 06-061-5 20X 25ML C141 8 Sample Multiplier: 1 Mar 20 16:05:26 2006 d: C:\MSDCHEM\1\METHODS\T01501250 e: Fri Mar 10 09:59:33 2006 a: Initial Calibration		6.00 8.00 on Mar 20 16:0'
Data Path: C:\ Data Path: C:\ Data File: 031 Acq On: 16 Operator: AF Sample: 06- Misc ALS Vial: 8 Quant Time: Mar Quant Title: OLast Update: Response via::	1800000 1600000 1200000 1000000 800000 600000 200000	Time> 4.00 6.00 8.00 10.00 12.00 TO15012505B.M Mon Mar 20 16:07:08 2006 RPT1



Sample Information

Run Information

Inlet Position : 8

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP LCI.MTH

Int. Std. : Yes

sample Type : Sample

Cryofocus: Yes

Analysis Type : Low Level

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Data Path : C:\MSDCHEM\1\DATA\2006 FEB\031506\

Data File : 031406 15.D

Acq On : 16 Mar 2006 Operator : AF 1:09 pm

: 06-061-6 20X Sample : 25ML B241 Misc

ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 20 16:06:29 2006

Quant Method: C:\MSDCHEM\1\METHODS\T015012505B.M

Quant Title :

QLast Update : Fri Mar 10 09:59:33 2006 Response via : Initial Calibration

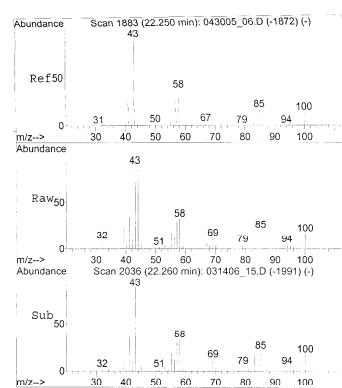
Internal Standards	R.T.	QIon	Response	Conc Units Dev(Min)
 Bromochloromethane 1,4-difluorobenzene chlorobenzene-d5 	19.30	114	1224893	0 10.00 ppbV -0.43 10.00 ppbV -0.15 0 10.00 ppbV -0.04
Target Compounds 6) MIBK	22.26	43	511615m	Qvalue)

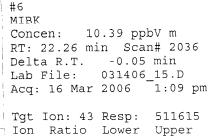
(#) = qualifier out of range (m) = manual integration (+) = signals summed

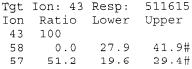
23/20/06

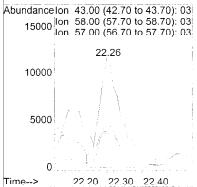
16 Mar 2006 1:09 pm AF AF AF AF AF B25ML B241 9 Sample Multiplier: 1 Mar 20 16:06:29 2006 1: C:\MSDCHEM\1\METHODS\TO15C12505B.M : Fri Mar 10 09:59:33 2006 1: Initial Calibration	TIC: 031406_15.D					ľ			8.00 10.00 12.00 14.00 16.00 18.00 20.00 22.00 24.00 26.00 28.00
ile : 031406_15.D 1					- -		 	 3	

Quantitation Report (Versioned)









Sample Information

Run Information

Inlet Position: 9

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std.: Yes

Sample Type : Sample

Cryofocus: Yes

Analysis Type : Low Level

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\

Datá File : 031406_08.D

Acq On : 16 Mar 2006 3:24 am

Operator : AF

Sample : 06-061-7 Misc : 500ML A204

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 20 15:48:01 2006

Quant Method : C:\MSDCHEM\1\METHODS\T015012505B.M

Quant Title :

QLast Update : Fri Mar 10 09:59:33 2006 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units De	v(Min)
 Bromochloromethane 1,4-difluorobenzene chlorobenzene-d5 		114	743457 3525012 4196234	10.00 ppbV 10.00 ppbV 10.00 ppbV	-0.04 -0.03 -0.02
Target Compounds				Q·	value

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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TO15012505B.M Mon Mar 20 16:05:55 2006 RPT:

Page: 2

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Sample Information

Run Information

Inlet Position : 3

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std. : Yes

Sample Type : Sample

Cryofocus: Yes

Analysis Type : Low Level

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\

Data File : 031406_09.D

Acq On : 16 Mar 2006 4:27 am

Operator : AF Sample : 06-061-1 Misc : 500ML A217

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 20 14:33:46 2006

Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

Quant Title :

QLast Update : Wed Feb 22 17:36:58 2006 Response via : Initial Calibration

Internal Standards	R.T. QIO	on Response	Conc Units Dev(Min)
1) Bromochloromethane 32) 1,4-difluorobenzene 47) chlorobenzene-d5	15.70 12 19.39 11 26.27 11		10.00 ppbV -0.10 10.00 ppbV -0.05 10.00 ppbV -0.02
System Monitoring Compounds 30) 1,2-dichloroethane-d4 48) toluene-d8		55 0 98 0	Vdqq 00.00 Vdqq 00.0
Target Compounds 12) acetone	9.29 4	13 214767m	Qvalue 7 0.90195 ppbV

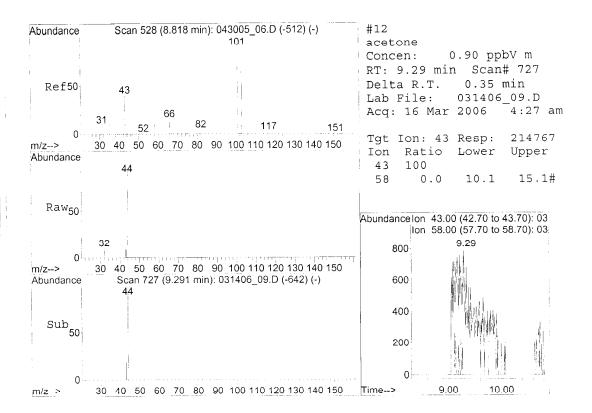
^{(#) =} qualifier out of range (m) = manual integration (+) = signals summed

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Acg On : 16 Mar 2006 4:27 am
Cperator : AF
Sample : 06-061-1
Nisc : 500ML A217
ALS Vial : 3 Sample Multiplier: 1



Sample Information

Run Information

Inlet Position: 4

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std. : Yes

Sample Type : Sample

Cryofocus : Yes

Analysis Type : Low Level

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\

Data File : 031406_10.D

Acq O% : 16 Mar 2006 5:29 am

Operator : AF

Sample : 06-061-1 DUP Misc : 500ML A217

ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 20 14:33:56 2006

Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

Quant Title :

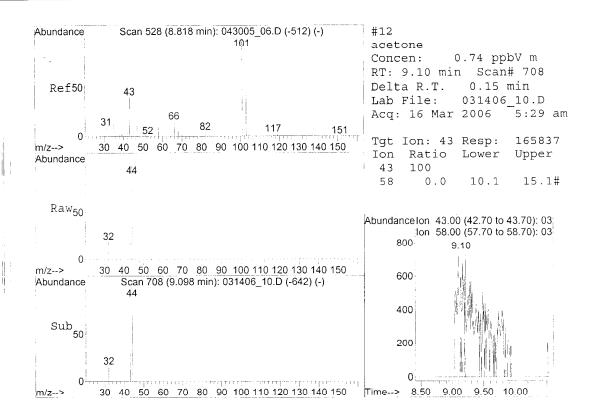
QLast Update: Wed Feb 22 17:36:58 2006 Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units Dev(Min)
1) Bromochloromethane	15.69	128	637314	10.00 ppbV -0.11
32) 1,4-difluorobenzene	19.38	114	3765796	10.00 ppbV -0.07
47) chlorobenzene-d5	26.26	117	4415292	10.00 ppbV -0.03
System Monitoring Compounds				
30) 1,2-dichloroethane-d4	0.00	65	0	0.00 ppbV
48) toluene-d8	0.00	98	0	0.00 ppbV
Target Compounds				Qvalue
12) acetone	9.10	43	165837m	0.73526 ppbV

^{(#) =} qualifier out of range (m) = manual integration (+) = signals summed

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C:\MSDCHEM\1\DATA\2006 031406_10.D 16 Mar_2006 5:29 am AF 06-061-1 DUP 500ML A217 4 Sample Multiplier: Mar_20_14:33:56_2006 d:C:\MSDCHEM\1\METHOD : wed Feb_22_17:36:58 a:Initial Calibration		escon escolonos de sente de s	
Path : C:\MSDCHEM\1\DATA\2006_FEB\031 File : 031406_10.D : 16 Mar 2006 5:29 am cor : AF : 06-061-1 DUP : 500ML A217 tal : 4 Sample Multiplier: 1 Time: Mar 20 14:33:56 2006 Method : C:\MSDCHEM\1\METHODS\T01502 Title : Wed Feb 22 17:36:58 2006 se via : Initial Calibration			4.00 1 Mon Ma
Data Path: 0 Data File: 0 Acq On : 0 Cperator: 2 Sample : 0 Als Vial : 0 Quant Time: 1 Quant Title Quant Title Quant Title Quant Title Quant Title	Abundance 650000 550000 500000 450000 350000 250000 150000	20000	Time> 4.00 6.00 TOI:5021805.M Mon Mar 20



Sample Information

Run Information

Sample Name: 061-1 DUP 031506_10

Inject Time : 03:00:21

Inlet Position: 4

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std. : Yes

Sample Type : Sample

Cryofocus: Yes

Analysis Type : Low Level

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\

Data File: 031406_11.D

Acq On : 16 Mar 2006 Operator : AF 6:32 am

Sample : 06-061-2 Misc : 500ML B235

ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 20 14:24:14 2006

Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

Quant Title :

QLast Update : Wed Feb 22 17:36:58 2006

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Uni	its I	Dev(Min)
 Bromochloromethane 1,4-difluorobenzene chlorobenzene-d5 	15.70 19.39 26.27	128 114 117	848396 3938388 5347579	10.00 p 10.00 p 10.00 p	Vdqq	-0.10 -0.06 -0.02
System Monitoring Compounds 30) 1,2-dichloroethane-d4 48) toluene-d8	0.00	65 98	0 0	0.00 p		
Target Compounds						Qvalue

^(#) = qualifier out of range (m) = manual integration (+) = signals summed

36.00 34.00 32.00 30.00 28.00 26.00 I, 2b-ensznedoroińa 24.00 22.00 TIC: 031406_11D 20.00 1,4-difluorobenzene,1 18.00 16.00 Bromochloromethane,i Quant Time: Mar 20 14:24:14 2006 Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M 14.00 12.00 : Wed Feb 22 17:36:58 2006 : Initial Calibration 10.00 8.00 00.9 4.00 QLast Update Response via Quant Title 150000 250000 20000 Abundance 750000 700000 000009 550000 500000 450000 400000 350000 300000 200000 100000 650000 Time-->

(QT Reviewe

ation Report

C:\MSDCHEM\1\DATA\2006_FEB\031506\

6:32 am

031406_11.D 16 Mar 2006

Data Path Data File

Acq On Operator Sample Multiplier:

AF 06-061-2 500ML B235 5 Sample P

> Misc ALS Vial

Sample

Page:

15:01:11 2006

TO15021805.M Mon Mar 20

Sample Information

Run Information

Inlet Position : 5

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std. : Yes

Sample Type : Sample

Cryofocus : Yes

Analysis Type : Low Level

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Quantitation Report

(LSC Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\

Data File : 031406 12.D

Acq On : 16 Mar 2006 Operator : AF 7:34 am

: 06-061-3 Sample : 500ML A230 Misc

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 20 16:37:31 2006

Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

Quant Title :

QLast Update : Wed Feb 22 17:36:58 2006 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response / C	Conc Units	Dev(Min)
1) Bromochloromethane 32) 1,4-difluorobenzene 47) chlorobenzene-d5	14.93 18.91 26.17	128 114 117	•		-0.54
System Monitoring Compounds 30) 1,2-dichloroethane-d4 48) toluene-d8	0.00	65 98	0	0.00 ppbV	
Target Compounds 12) acetone	8.14	43	253450m b	0.85007 p	Qvalue pbV

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quantitation Report (LS				
	The same of the sa		1	

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_12.D
Acg On : 16 Mar 2006 7:34 am
Operator : AF
Sample : 06-061-3
Misc : 500ML A230
ALS Vial : 6 Sample Multiplier: 1

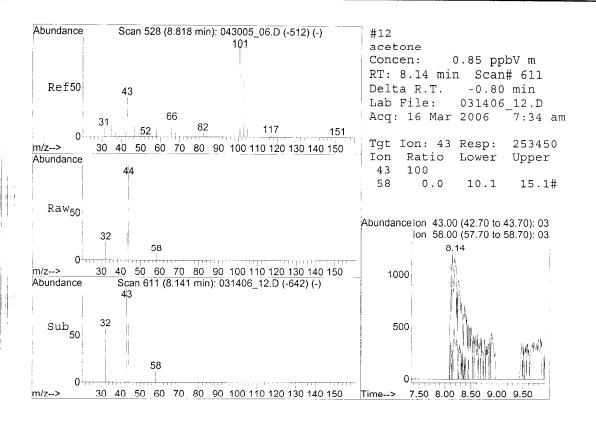
Quant Time: Mar 20 16:37:31 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

QLast Update : Wed Feb 22 17:36:58 2006 Response via : Initial Calibration

Response via : Initial Calibration

							36.00
							34.00
1 1 1							32.00
						<u> </u>	30.00
							28.00
	I,ĉb-ana znadorolr						26.00
							24.00
2.D							22.00
TIC: 031406_12.D							20.00
TIC:			J'əuəzu	1,4-difluorobe			18.00
!							16.00
					Bromochloromethane,i		#
							14.00
							12.00 14.00
							12.00
						enolece	10.00
							8.00 12.00
							8.00 12.00
Abundance 650000	000000	500000	400000	300000	200000		8.00 10.00 12.00

T015021805.M Mon Mar 20 16:37:42 2006 RPT1



Sample Information

Run Information

Inlet Position: 6

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std.: Yes

Sample Type : Sample

Cryofocus : Yes

Analysis Type : Low Level

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

(QT Reviewed) Quantitation Report

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\

pata File : 031406_13.D

: 16 Mar 2006 8:22 am Acq On

Operator : AF

Sample : 06-061-4 20X

Misc : 25ML C135 ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 20 14:55:05 2006

Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

Quant Title :

QLast Update : Wcd Fcb 22 17:36:58 2006 Response via : Initial Calibration

Inte	rnal Standards	R.T.	QIon	Response	Conc Units	Dev(Mi	n) 	
1)	Bromochloromethane	15.26	128	417255m 9	10.00 pph	. 0 - V	53	
32)	1,4-difluorobenzene	19.30	114	2855963m	10.00 ppk		14	
47)	chlorobenzene-d5	26.27	117	5570010m	/ 10.00 pph	.0- Vc	02	
Syst	em Monitoring Compounds							
	1,2-dichloroethane-d4	0.00	65	0	0.00 ppl			
48)	toluene-d8	0.00	98	0	199 (00.0	VC		_
						- 7		(AB)
_	et Compounds			1.		Qvalu	e	
12)	acetone	8.10		18611418m y				0 > 5
13)		6.95	101	4452293m				- ()001
	2-butanone (MEK)	- 15.03	43	105127	1.20762		64	1 Was
26)	n-hexan e	15.63	57		Below Cal		13	
34)		18.41	78	912391m				
	cyclohexane	18.92	56	1750440m	14.95583			
39)	2,2,4-trimethylpentane	20.54	57	1069274m				
41)	n-heptane	21.12	43	5606311m \				
42)	trichloroethene	20.49	130	289032	1.81388		19	
49)	toluene	23.66	91	72395325m þ	134.34099	ppbV		
53)	tetrachloroethene	25.36	166	565882m	1.50441	ppbV		
54)	chlorobenzene	26.33	112	1725557	3.51905	ppbV #	84	
55)	ethylbenzene	26.85	91	25017137	38.24945	ppbV #	83	
56)	p & m-xylene	27.09	91	22209551	41.77608	ppbV #	18	\mathcal{A}
58)	styrene	27.60	104	509310 -	- 1.54311	# Vdqq	59	0000
60)	o-xylene	27.74	91	8033508	14.42320	ppbV	89	poen 1
61)	4-ethyl toluene	29.38	105	5501963m (5.23056	Vdqq		:maion
62)	1,3,5-trimethylbenzene	29.55	105	2396763 "	4.59423		92	
	1,2,4-trimethylbenzene	30.12	105	4142189	9.00578	ppbV #	90	
	1,4-dichlorobenzene	30.44	146	310394	0.70674	ppbV #	36	
	•							

(#) = qualifier out of range (m) = manual integration (+) = signals summed



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34.00 32,00 Page: 1,2,4-trimethylbenzene 1,4-dichlorobenzene 30.00 anaShadlyArsAffirf-a,e,r 28.00 o-xλlene siyrene b & m-xylene ethylbenzene 26.00 เ,Zb-๑กอธูคู<u>ย</u>คู่คู่**ผูญ**ญเก่ว efrachloroethene 24.00 eneuloi 22.00 TIC: 031406_13.D u-peptane Elghdenethy pentane 20.00 1,4-difluorobenzene,1 cλcjopexsue 18.00 Benzene 16.00 3-butanone (MEK) Bromochloromethane,i Quant Time: Mar 20 14:55:05 2006 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M Quant Title : 14.00 C:\MSDCHEM\1\DATA\2006_FEB\031506\ 12.00 : Wed Feb 22 17:36:58 2006 : Initial Calibration 25ML C135 7 Sample Multiplier: 10.00 8:22 am 8.00 031406_13.D 16 Mar 2006 AF 06-061-4 20X trichlorofluoromethane 6.00 4.00 QLast Update Response via Data Path Data File Misc ALS Vial Operator Abundance 1e+07 Acq On 0000006 8000000 7000000 6000000 5000000 4000000 3000000 2000000 1000000 Sample Time-->

36.00

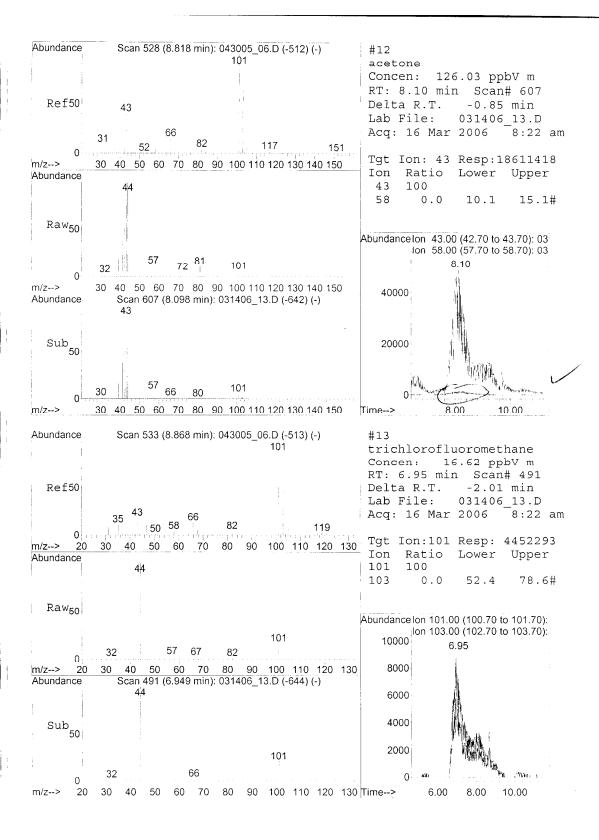
 $^{\circ}$

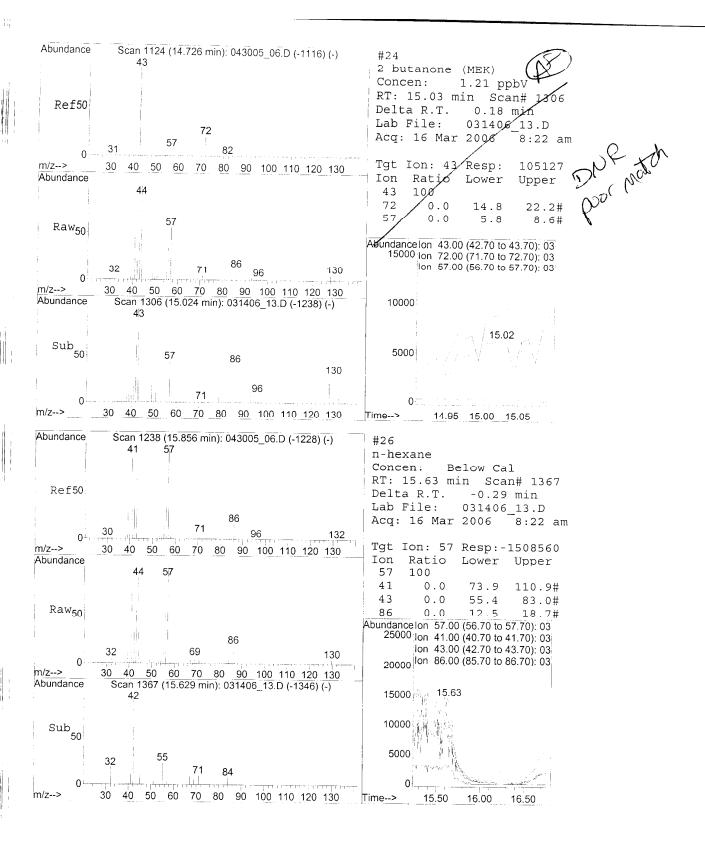
RPT1

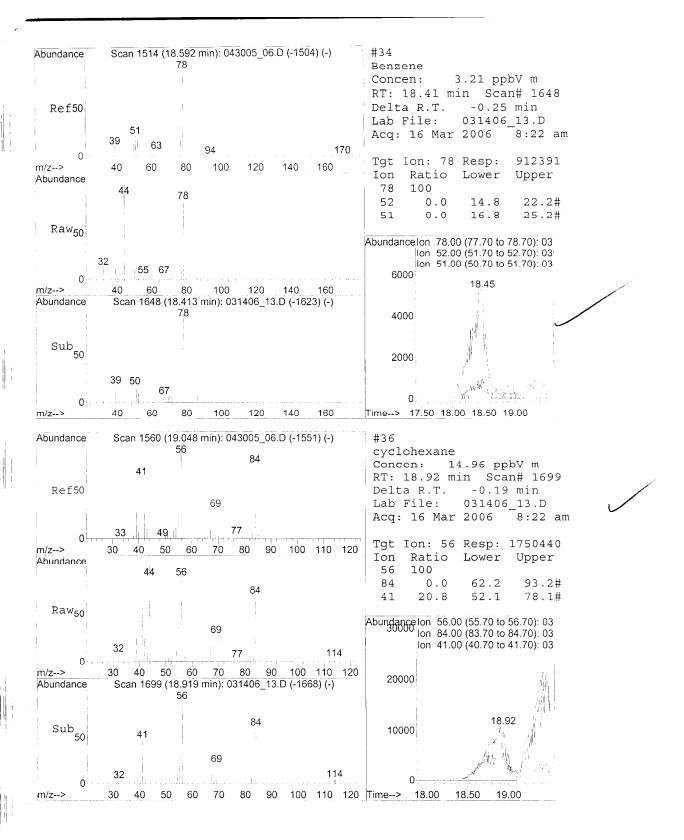
15:01:18 2006

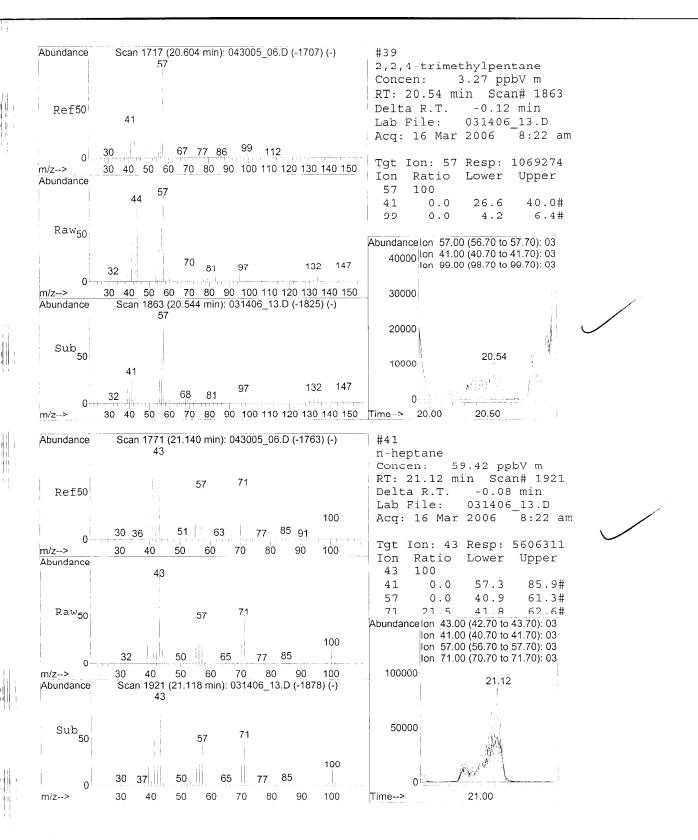
2 C

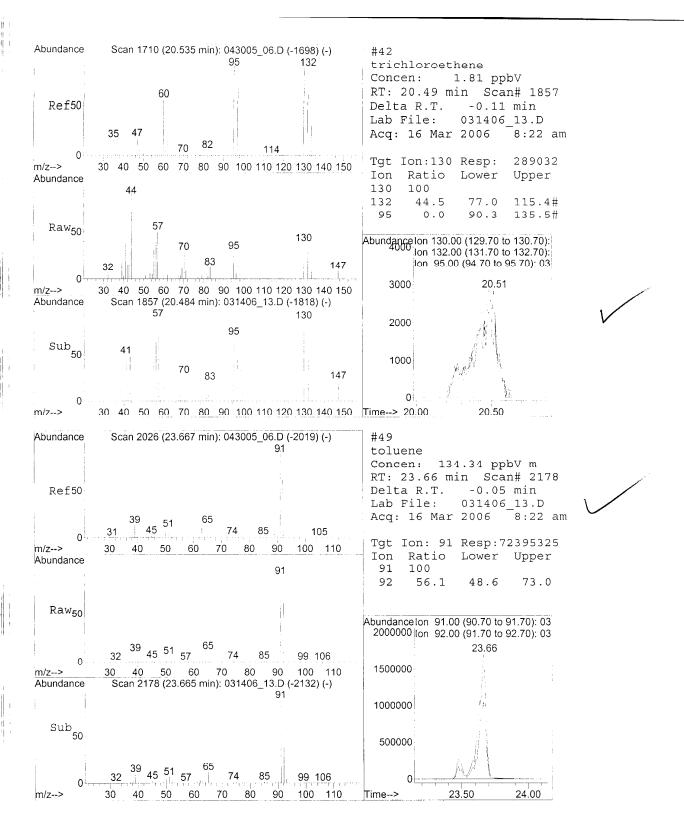
TO15021805.M Mon Mar

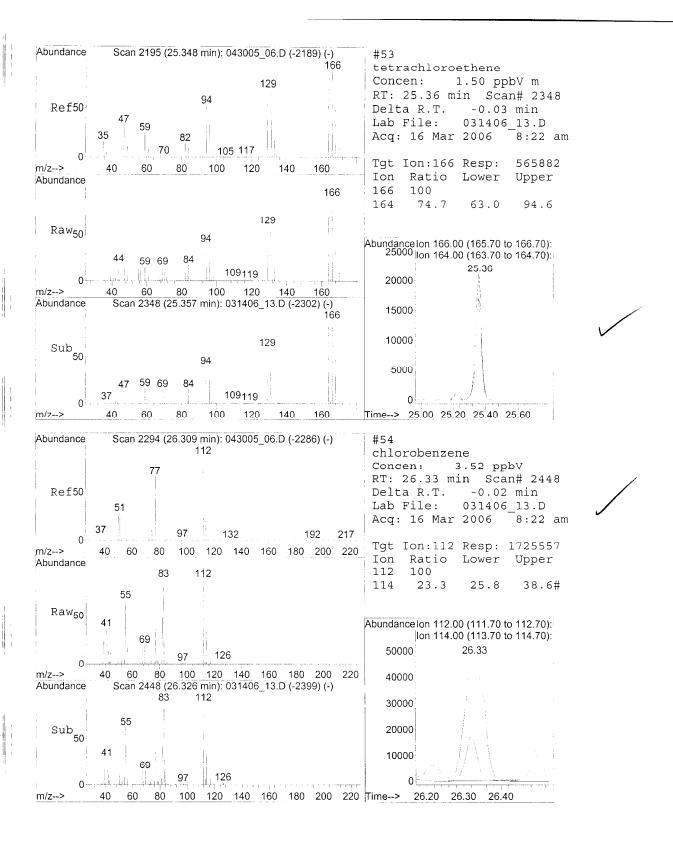


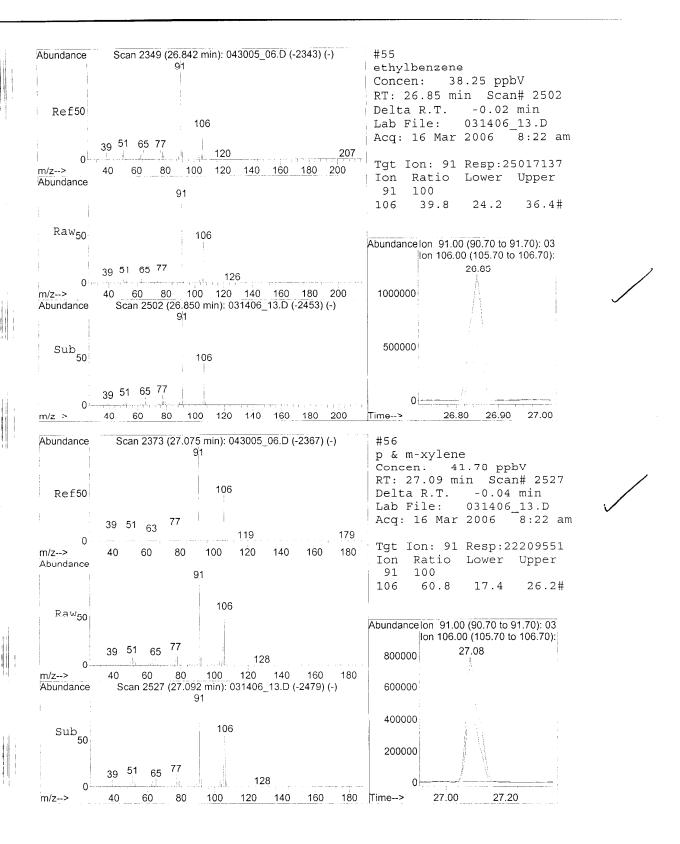


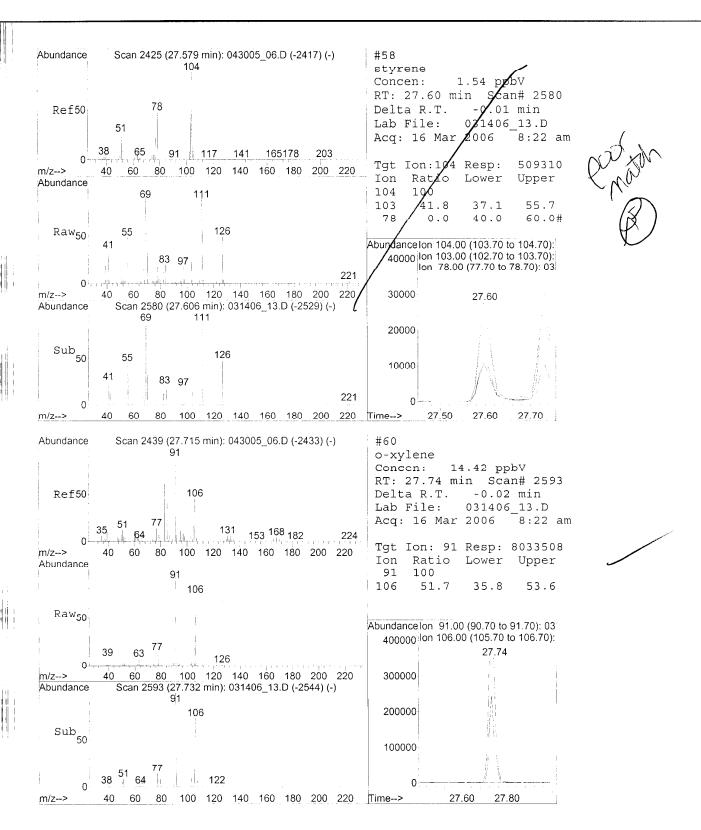


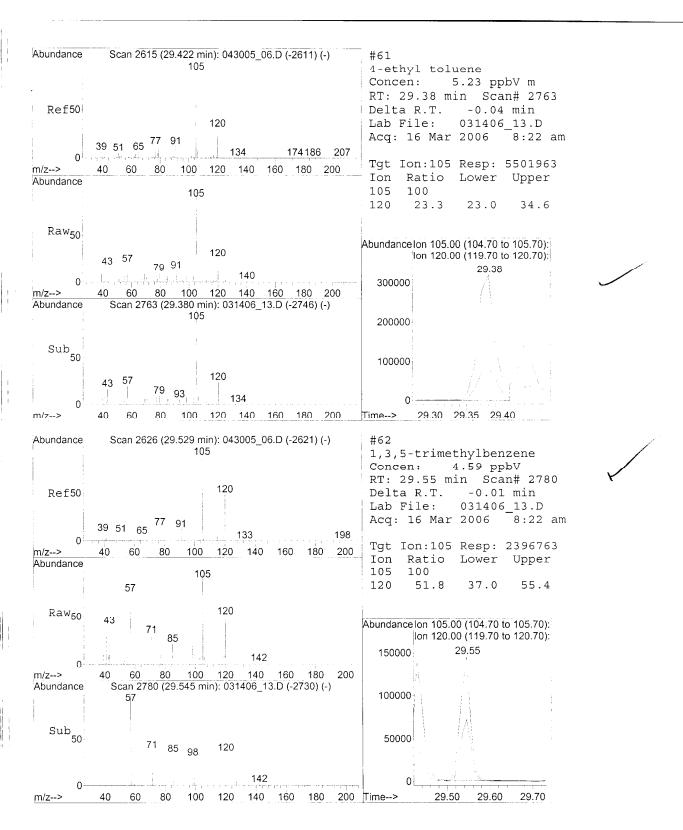


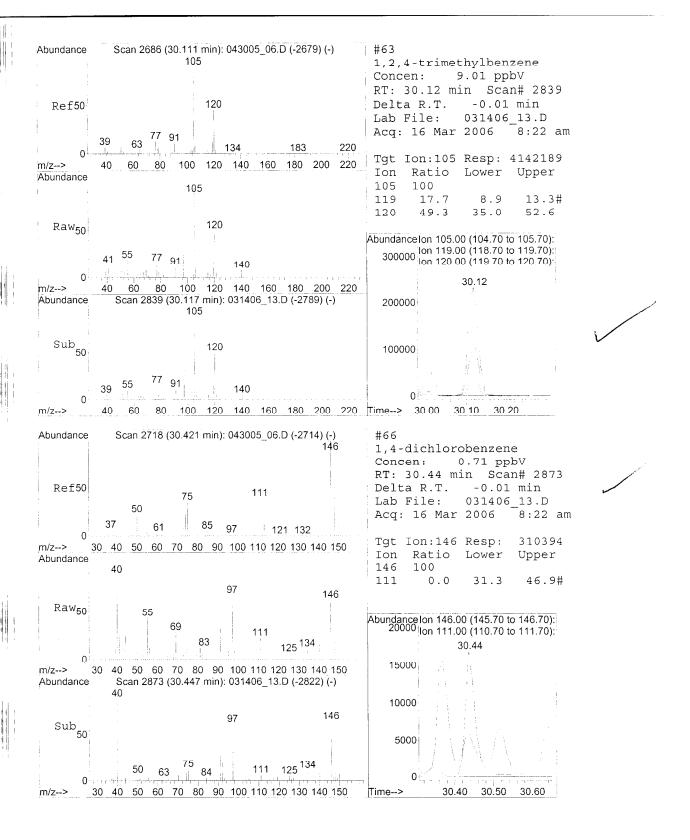












Sample Information

Run Information

Sample Name: 061-4 C135 031506_13

Inject Time : 05:53:21

Inlet Position: 7

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std.: Yes

Sample Type : Sample

Cryofocus: Yes

Analysis Type : Low Level

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\

Data File : 031406 14.D

: 16 Mar 2006 12:21 pm Acq On

Operator : AF

\$ample : 06-061-5 20X : 25ML C141 Misc

ÄLS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 20 14:58:15 2006

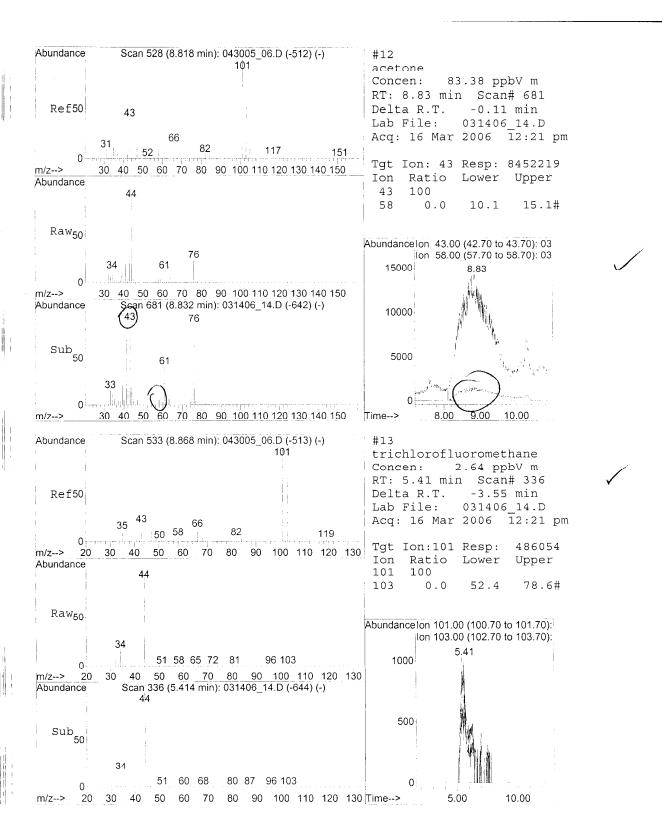
Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

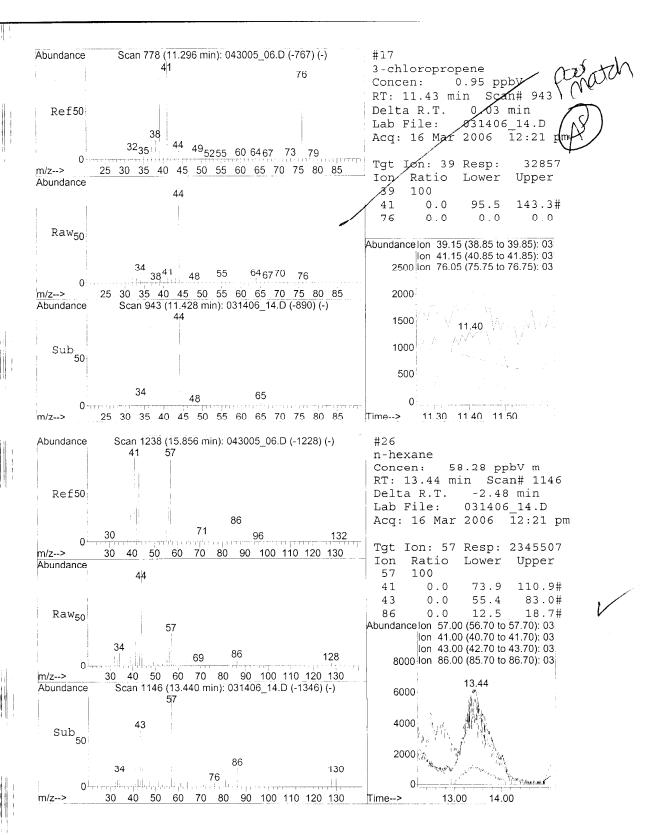
Quant Title : QLast Update : Wed Feb 22 17:36:58 2006 Response via : Initial Calibration

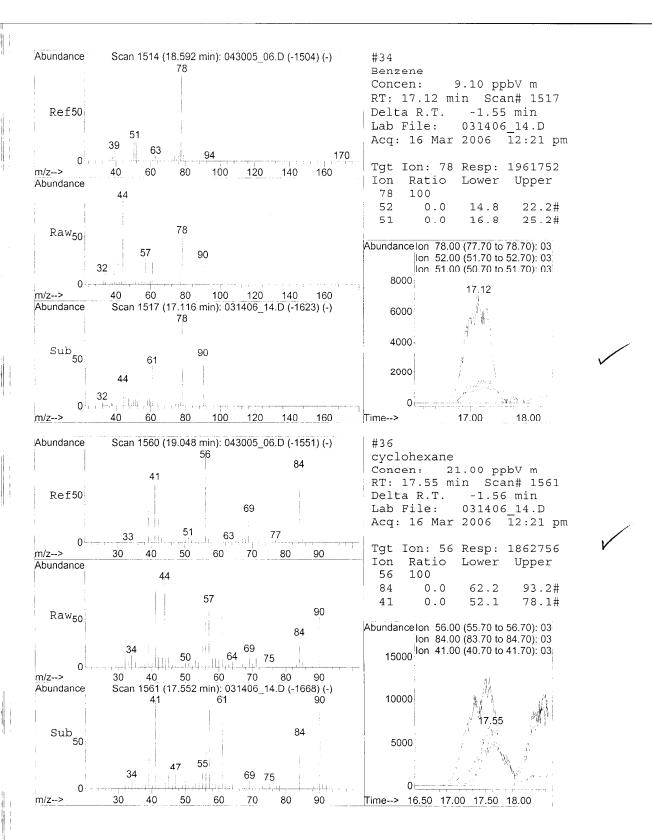
Inte	rnal Standards	R.T.	QIon	Response Conc Units Dev(Min)
1)	Bromochloromethane	13.23	128	286430m y 10.00 ppbV -2.57
32)	1,4-difluorobenzene	18.26	114	2164402m / 10.00 ppbV -1.19
47)	•	26.10	117	3563744m 10.00 ppbV -0.18
: Svst	em Monitoring Compounds			•
. 4	1,2-dichloroethane-d4	0.00	65	0 0.00 ppbV
411 .	toluene-d8	0.00	98	0 0.00 Vdqq 00.0
Targ	get Compounds			Qvalue
12)	acetone	8.83	43	8452219m y 83.38022 ppbV
13)	trichlorofluoromethane	5.41	101	
- 17)	-3-chloropropene	11.43		1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
26)	n-hexane	13.44	57	
34)	Benzene	17.12	78	+ + +
36)	cyclohexane	17.55	56	1862756m 21.00070 ppbV
39)	2,2,4-trimethylpentane	19.68	57	2506924m 10.10146 ppbV
41)	n-heptane	20.35	43	5213807m 72.91791 ppbV (A) DOUC NOT
.42)	_trichloroethene	19.61	- 130	
46)	1,1,2-trichloroethane	23.38	97	110105 , 1.13012 PPDV - 14
49)	toluene	23.27	91	24413428m 70.80700 ppbV
53)	tetrachloroethene	25.14	166	368813m 1.53249 ppbV
54)	chlorobenzene	26.17	112	3568031 11.37299 ppbV # 83
55)	ethylbenzene	26.74	91	7616155 18.20006 ppbV 92
56)	p & m-xylene	27.00	91	7470414 21.96251 ppbV # 33
60)	o-xylene	27.67	91	2176518 6.10757 ppbV 93
61)	4-ethyl toluene	29.36	105	1401980m () 2.08316 ppbV
62)	1,3,5-trimethylbenzene	29.54	105	
	1,2,4-trimethylbenzene	29.80	105	1072394m > 3.64414 ppbV
	1,4-dichlorobenzene	30.44	146	

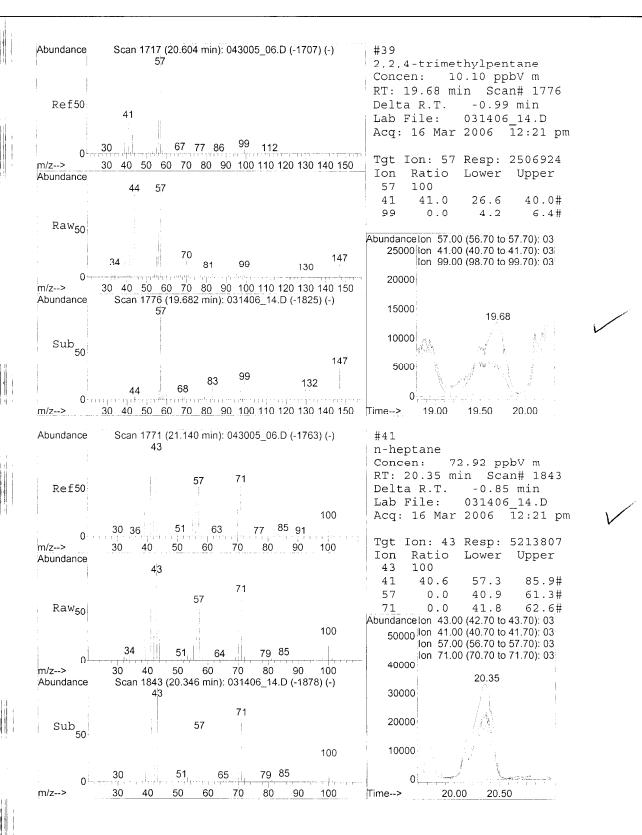
⁼ qualifier out of range (m) = manual integration (+) = signals summed

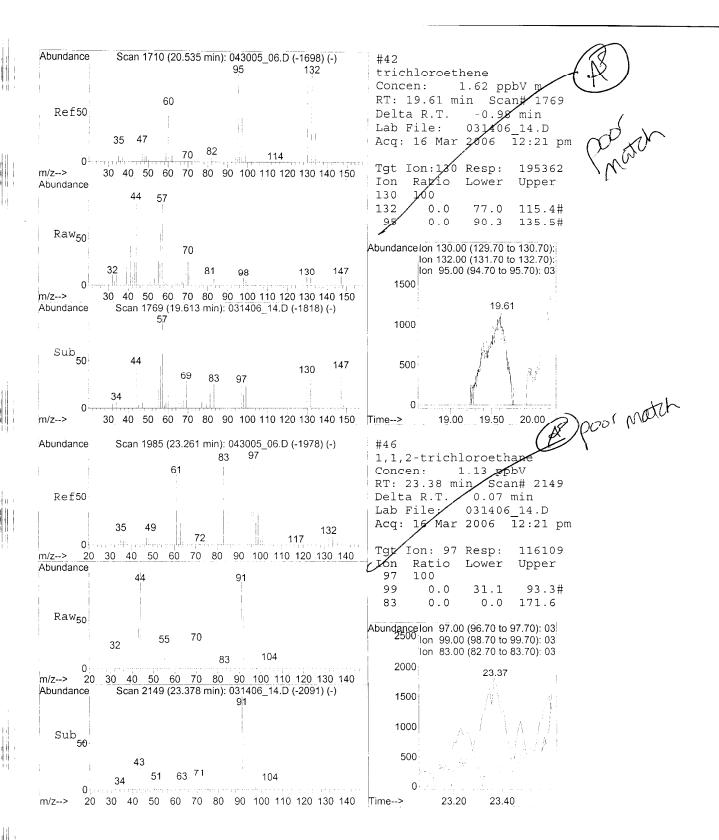
		00.36.00
		32 00 34.00
	enesnedlydiam <u>uie3.5-</u> enesnedlydiamii-3.7-1 enesnedoioldaib-4.1	30.00
· 	b g m-x\ieue b g m-x\ieue elp\ipparsene	28.00
nd∯ i	eneshene enesheda faha nesnadorolota	.00 26.00
	loluene loluene	22.00 24.0
	TIC: 031406 1406	20.00 22.
	Cyclohexane cyclohexane Benzene	18.00
		16.00
031506\ 5021805.M	Bromochloromethane.i	14.00
1 pm 1.ier: 1 006 ETHODS\TO15021 36:58 2006 ation	3-chloropropene	00 12.00
12:2 12:2 ultip ultip x\1\R	acelone	8.00 10.00
C:\MSDCHEM\1 031406_14.D 16 Mar 2006 AF 06-061-5 20X 25ML C141 8 Sample M Mar 20 14:58 3 : C:\MSLCHER 1 : Wed Feb 2	anethanorollorollorollorol	00.9
. C:\ . 03:\ . 16- . 16- . 25M . 25M . 8		4.00
Data Path: Data File: Acq On: Operator: Sample: Misc: ALS Vial: Quant Time: Quant Title Quast Update Response via	400000 400000 400000 500000 500000 500000 500000 500000 500000 500000 500000 500000 500000 500000 500000 500000 500000 5000000	0 >= 0 Time>

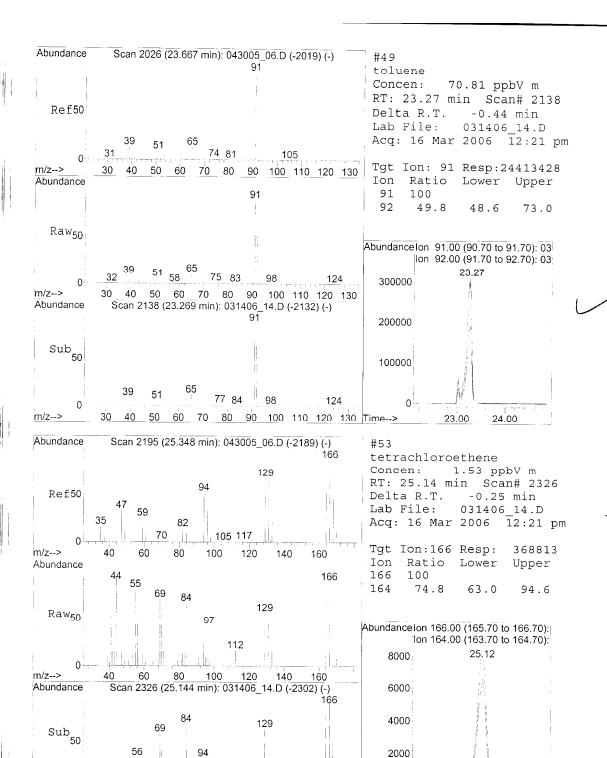












m/z-->

109

120

140

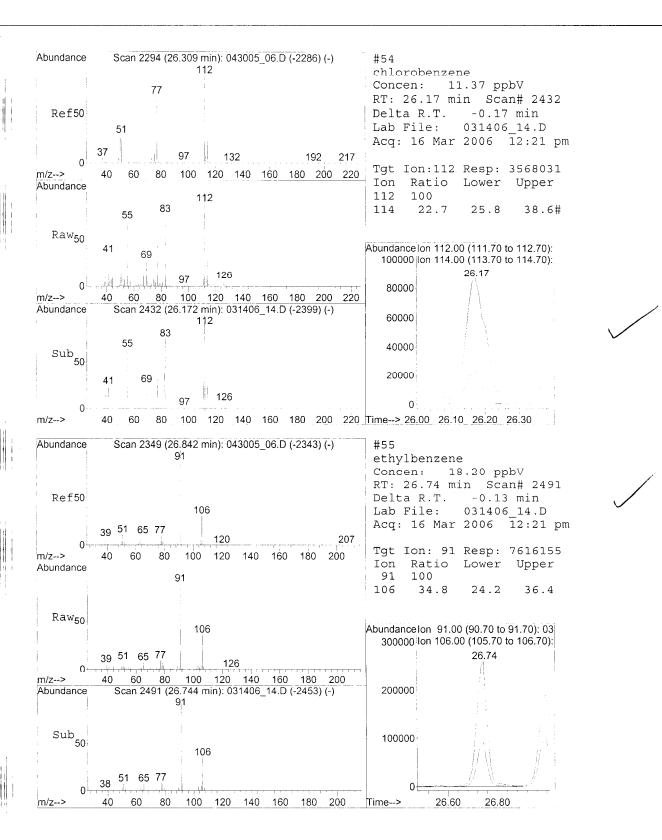
160

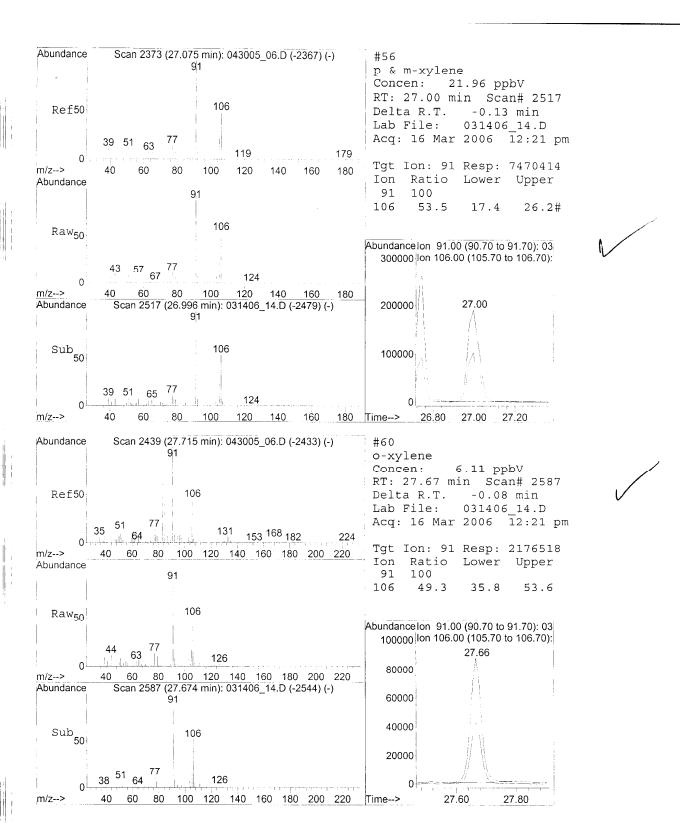
Time-->

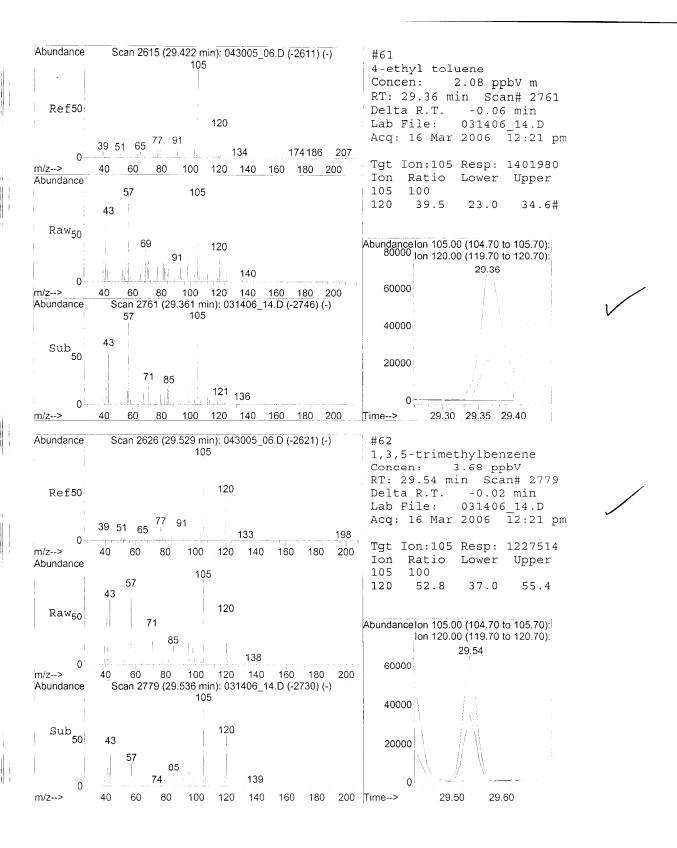
100

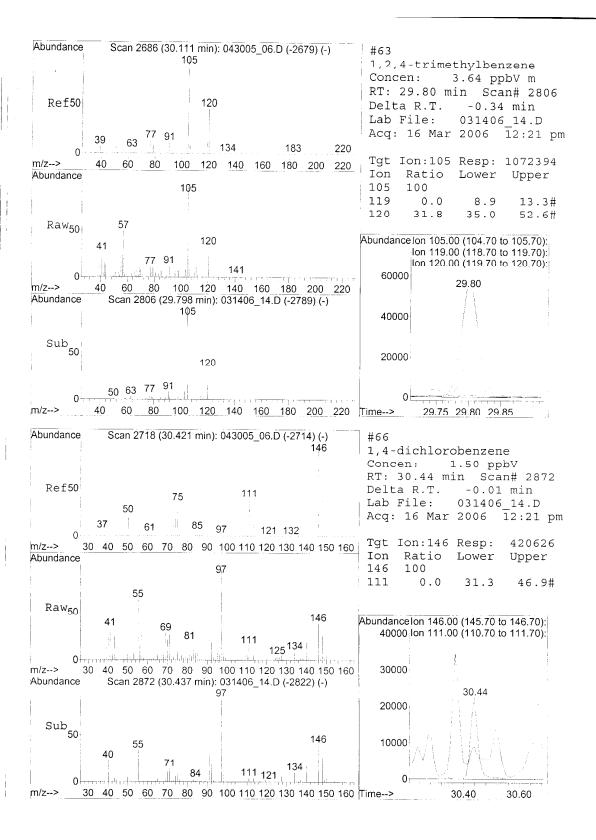
80

25.00









Sample Information

Run Information

Sample Name: 061-5 C141 031506_14

Inject Time : 09:52:21

Inlet Position: 8

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std. : Yes

Sample Type : Sample

Cryofocus : Yes

Analysis Type : Low Level

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Data Path : C:\MSDCHEM\1\DATA\2006 FEB\031506\

Data File : 031406 15.D

Acq On : 16 Mar 2006 1:09 pm Operator : AF

Sample : 06-061-6 20X Misc : 25ML B241 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 20 15:00:02 2006

Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

Quant Title :

QLast Update : Wed Feb 22 17:36:58 2006 Response via : Initial Calibration

Internal	Standards	R.T.	QIon	Response (Conc Units	Dev(Min)	
1) Brow	nochloromethane	15.36	128	242520m	10.00 pph	V -0.43	3
32) 1,4-	difluorobenzene	19.30	114	1224893	10.00 pph	V -0.15	
	probenzene-d5	26.25	117	3522410m	10.00 pph	oV -0.04	Į.
System Mo	onitoring Compounds						
±	dichloroethane-d4	0.00	65	0	0.00 pph	V	
48) tolu	iene-d8	0.00	98	0	0.00 pph	V	
Target Co	ompounds					Ovalue	
	romethane	4.51	50	13278	0.54616	_	42 (1)
-	proethane	$\frac{-1.31}{6.71}$	- 64 -	- 29626 -	2.08516		43
,	chlorofluoromethane	8.70					matches
•	itanone (MEK)	14.57	43	316878	6.26266		64
	cahydrofuran (THF)	16.94	42	62254	2.17818	# ∀d qq	28 P POOR.
34) Benz		18.44	78	1178525	9.66214		66 Match
36) cyc]	lohexane	18.86	56	1103456	21.98229	ppbV #	50
	4-trimethylpentane	20.52	57	921323	6.55987	ppbV #	47
	eptane	21.09	43	3706068	91.58674	ppbV #	90
42) trio	chloroethene	20.46	130	197315m y	2.88721	ppbV	
49) toli		23.65	91	42230708m	123.92028		
53) teti	cachloroethene	25.36	166	685779m 🦫	2.88298	ppbV	
54) chlo	orobenzene	26.32	112	2210815	7.12960	ppbV #	80
55) ethy	ylbenzene	26.85	91	18165201	43.91812	ppbV	95
	m-xylene	27.08	91	19159765	56.98941		35
60) o-x	/lene	27.73	91	5149345	14.61923	ppbV	91
61) 4-ei	thyl toluene	29.37	105	3071990m Q			
	,5-trimethylbenzene	29.54	105	1489826	4.51584	ppbV	88
63) 1,2	,4-trimethylbenzene	30.12	105	3354231	11.53189		89
	-dichlorobenzene	30.44	146	379721	1.36719	ppbV #	82

^{(#) =} qualifier out of range (m) = manual integration (+) = signals summed

		roeihene chtebethasened5,1 ethyllpenzene p & m-xylene	25.00 28.00
ic Ir	<u>.</u>	foluene	24.00
(C)	TIC: 031406_15.D		20.000 Pig/domether n-hepti
·eviewed	71 <u>C: 0</u>		Benzene Cyclohexane Cyclohexane
	:	(HHT) nsv	16.00 tetrahydrofu
abla		oromethane, i	Bromochlo
MSDCHEM\1\DATA\2006_FEB\031506\ 406_15.D Mar 2306 1:09 pm 061-6 20X LL B241 Sample Multiplier: 1 20 15:00:02 2006 C:\MSDCHEM\1\METHODS\TO15021805.M Wed Feb 22 17:36:58 2006 Initial Calibration		(мек)	14.00
itation 06_FEB\ m r: 1 ODS\TO1!	:		12.00
C:\MSDCHEM\1\DATA\2006_031406_15.D 16 Mar 2506 1:09 pm AF 06-061-6 20X 25ML B241 9 Sample Multiplier: Mar 20 15:00:02 2006 : C:\MSDCHEM\1\METHODS: : Wed Feb 22 17:36:58 : Initial Calibration		enediemotouliovaldai	
CHEM\1\I CHEM\1\I 2006 -6 20X 241 mple Mul 15:00:0 4SDCHEM\ Feb 22		cpiotogipgue	8.00
C:\MSDCHEM\ 031406_15.D 16 Mar 2006 AF 06-061-6 20 25ML B241 9 Sample Mar 20 15:0 H: C:\MSDCH			0.00
	. chloromethane		4.00
Data Path: Data File: Acq On: Operator: Sample: Misc: ALS Vial: Quant Time: Quant Method Quant Title Diast Update Response via	Abundance 3600000 3200000 3000000 2800000 2600000	22000000 2000000 1800000 1400000 1000000 800000 600000	400000 200000 0 Time>

TO15021805.M Mon Mar 20 15:01:40 2006 RPT1

36.00

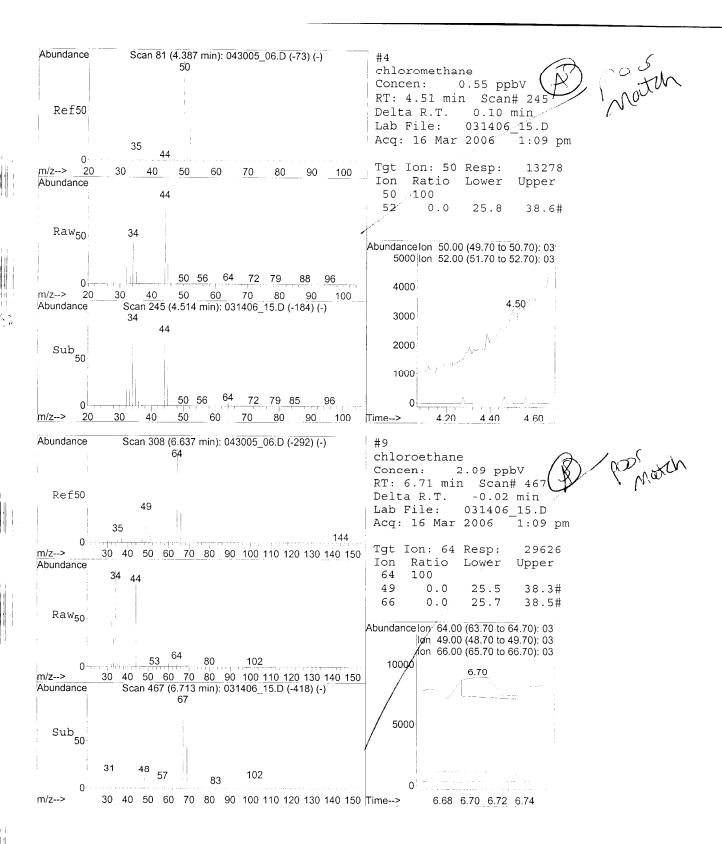
34.00

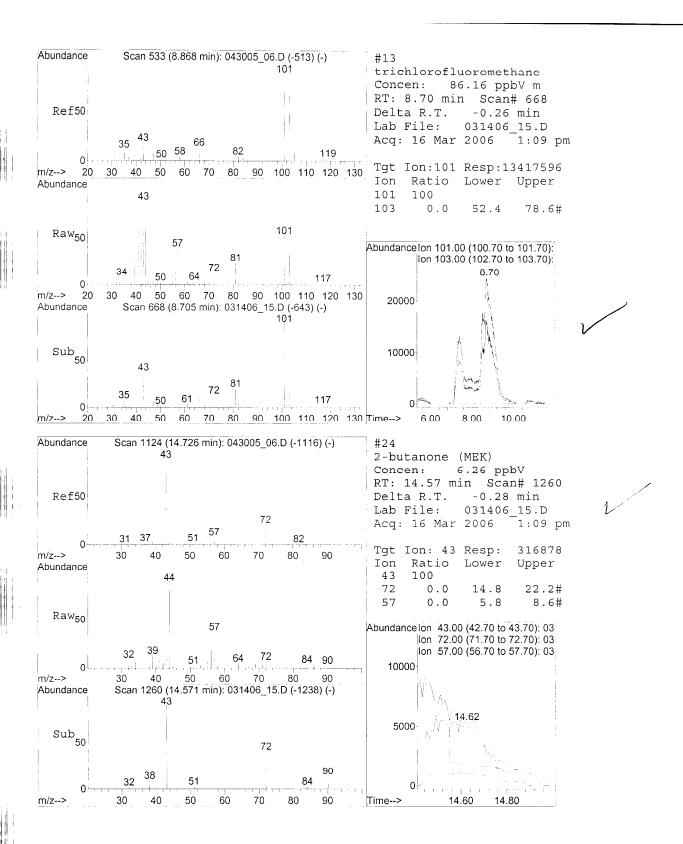
30.00

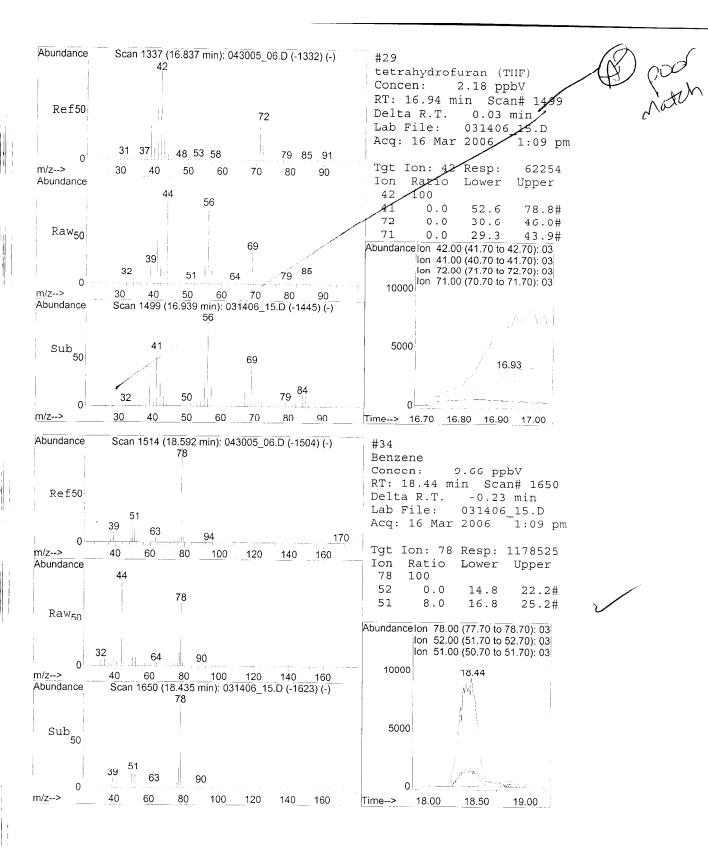
9nəznədoroldzib-4,1

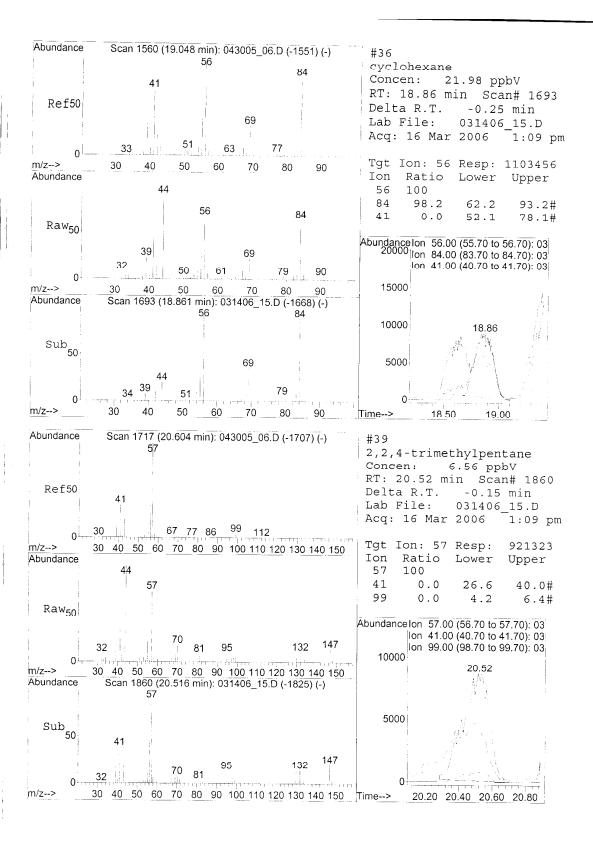
1,2,4-trimethylbenzene

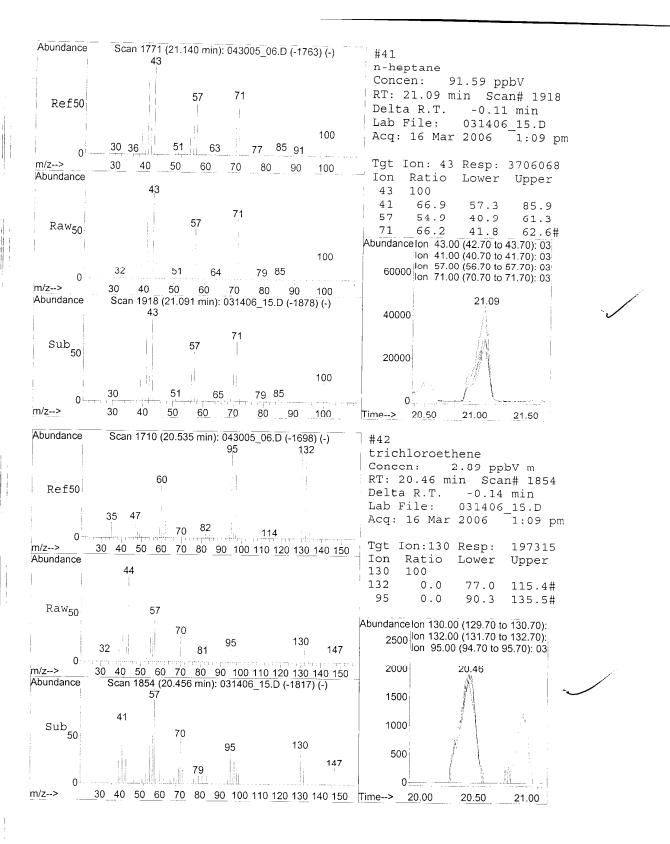
1,3,5-trimethylderkere

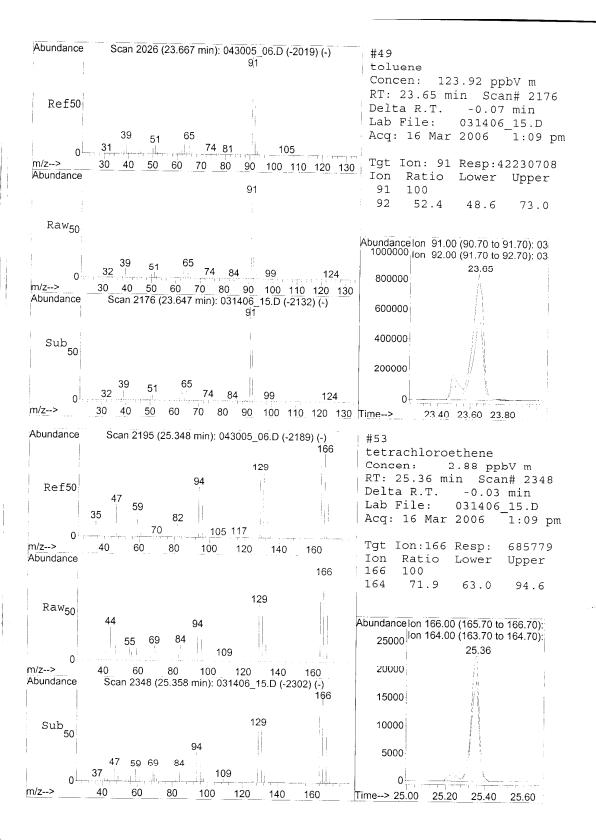


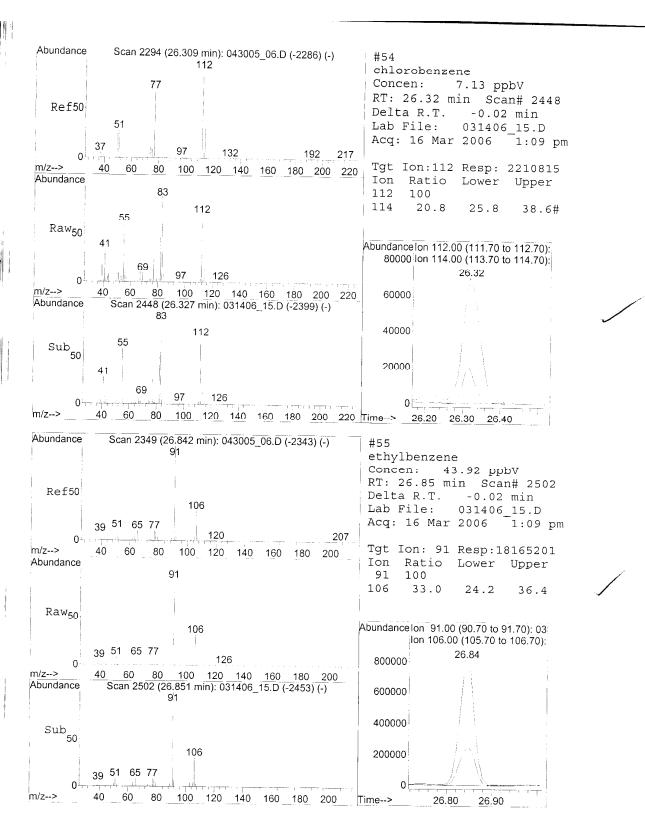


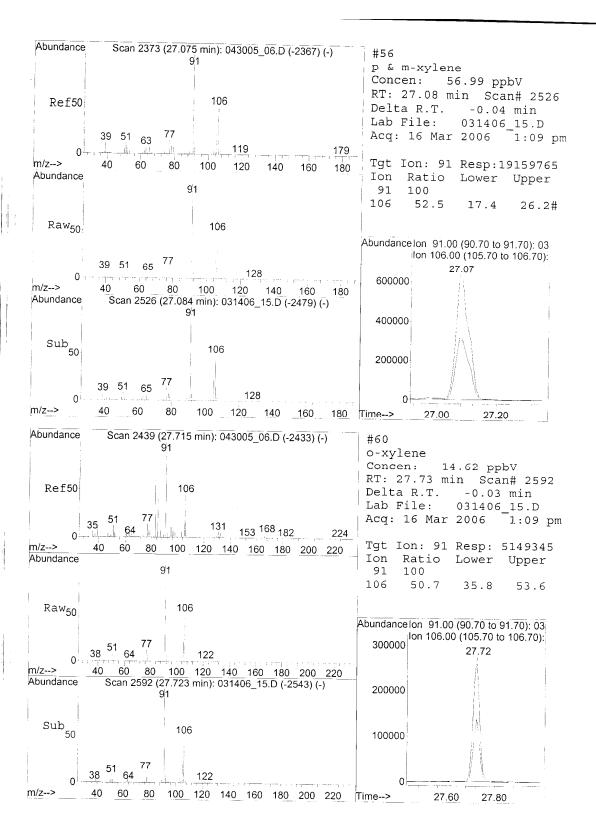


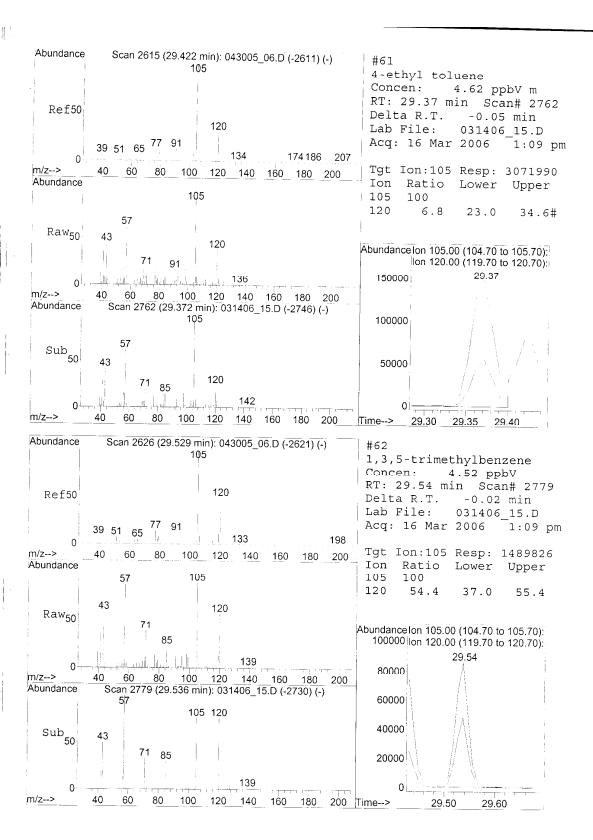


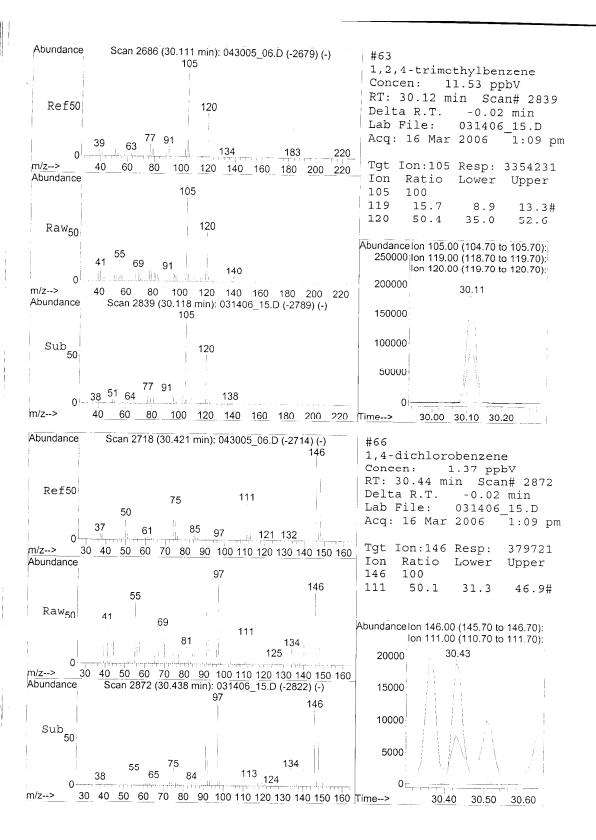












Sample Information

Run Information

Sample Name: 061-6 B241 031506_15

Inject Time : 10:40:21

Inlet Position : 9

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std. : Yes

Sample Type : Sample

Cryofocus : Yes

Analysis Type : Low Level

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\

Data File : 031406_08.D

Acq On : 16 Mar 2006 Operator : AF 3:24 am

: 06-061-7 : 500ML A204 Sample Misc

ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 20 16:14:11 2006

Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

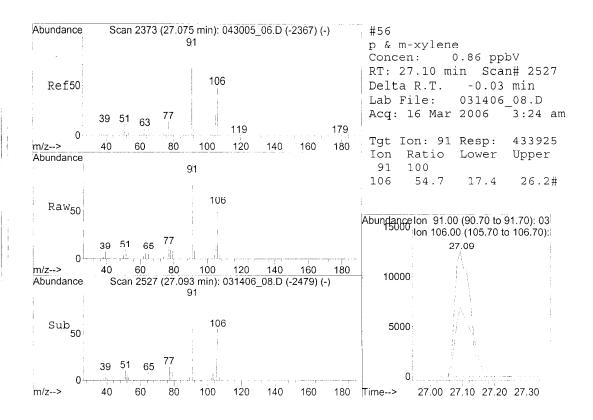
Quant Title :

QLast Update : Mon Mar 20 16:13:59 2006 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units Dev(Min)
1) Bromochloromethane	15.76	128	743457	10.00 ppbV -0.04
32) 1,4-difluorobenzene	19.42	114	3525012	10.00 ppbV -0.03
47) chlorobenzene-d5	26.27	117	4196234	10.00 ppbV -0.02
System Monitoring Compounds				
30) 1,2-dichloroethane-d4	0.00	65	0	Vdqq 00.0
48) toluene-d8	0.00	98	0	0.00 ppbV
Target Compounds 56) p & m-xylene	27.10	91	433925	Qvalue 0.86186 ppbV # 31
50) p & maxyrene	27.10	91	433323	0.00100 ppnv # 310.

^{(#) =} qualifier out of range (m) = manual integration (+) = signals summed

	-														34.00 36.00
														Sec.	32.00
14 -		1'9	gp-əuəzv	-cµl oc ope								al Summers	გ ш-xλlen	d 2000	00 28.00 30.00
															24.00 26.00
	TIC: 031406_08.D						l,e,l	orobenzer	ային-4, ի	20000 MA					20.00 22.00
	, -								į	.anethane,	mochloro	ora		eten wid T	16.00 18.00
FEB\031506\ 1 \TO15021805.M	!														12.00 14.00
\DATA\2006_ 3:24 am altiplier: :11 2006 M\1\METHODS 0 16:13:59 alibration															8.00 10.00
C:\MSDChem\1\DA: 031406_08.D 16 Mar 2006 3 AF 06-061-7 500ML A204 3 Sample Mult: Mar 20 16:14:11 d: C:\MSDCHEM\1' : e: Mon Mar 20 18: a: Initial Calib															6.00
Data Path: C Data File: 0 Acq On: 10 Operator: Al Sample: 0 Misc: 5 ALS Vial: 3 Quant Time: Ma Quant Title Qlast Update Response via	Abundance 700000	650000	000009	550000	200000	450000	400000	350000	300000	250000	200000	150000	100000	20000	0 4.00



Sample Information

Run Information

Sample Name: 061-7 A204 031506_08

Inject Time : 00:55:21

Inlet Position : 3

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std. : Yes

Sample Type : Sample

Cryofocus : Yes

Analysis Type : Low Level

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

LSC Area Percent Report

Data Fath : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406_09.D

Acq On : 16 Mar 2006 Operator : AF 4:27 am

Sample : 06-061-1 Misc : 500ML A217 ALS Vial : 3 Sample Multiplier: 1

Integration Parameters: lscint.e

Integrator: ChemStation

Smoothing : OFF Filtering: 5

Sampling : 1 Min Arca: 5 % of largest Peak

Start Thrs: 0.2 Max Peaks: 100 Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent > Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M

Title

Signal : TIC

peal	k R.T.	first	max	last	PΚ	peak	corr.	corr.	% of
#	min	scan	scan	scan	TY	height	area	% max.	total
144									
1	15.692	1343	1373	1397	BV 3	70517	4313225	31.45%	9.935%
2	17.455	1541	1551	1554	BB 2	83172	781400	5.70%	1.800%
3	19.387	1739	1746	1770	VV 2	240391	8622071	62.87%	19.860%
4	26.268	2431	2442	2471	BB	629912	13713406	100.00%	31.587%
5	27.034	2514	2521	2523	BV 2	43241	611666	4.46%	1.409%
6	27.141	2523	2532	2534	VV 7	107559	3472465	25.32%	7.998%
7	27.180	2534	2536	2545	8 VV	162457	4848754	35.36%	11.168%
8	27.306	2545	2549	2551	VV 5	116057	2652145	19.34%	6.109%
9	27.344	2551	2553	2556	VV	77648	984348	7.18%	2.267%
10	27.422	2556	2561	2565	VV 5	90228	2059322	15.02%	4.743%
11	27.509	2565	2570	2577	VV 5	53538	1356533	9.89%	3.125%

Sum of corrected areas: 43415335

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\ Data File : 031406 09.D Acq On : 16 Mar 2006 4:27 am Operator : AF Sample : 06-061-1 Misc : 500ML A217 ALS Vial Sample Multiplier: 1 : 3 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M Quant Title : TIC Library : C:\DATARASE\NIST02.L TIC Integration Parameters: lscint.e

015021805.M Mon Mar 20 16:15:52 2006 RPT1

```
Abundance
                                                        TIC: 031406_09.D
   600000
   500000
   400000
   300000
   200000
   100000
Time-->
             5.50 6.00
                          6.50
                                7.00
                                      7.50
                                            8.00 8.50 9.00 9.50 10.00 10.50 11.00 11.50 12.00 12.50 13.00
Abundance
                                                        TIC: 031406_09.D
  600000
  500000
  400000
  300000
                                                                                  19.39
  200000
                                                         17.46
  100000
                                   15.70
Time--> 13.50 14.00 14.50 15.00 15.50 16.00 16.50 17.00 17.50 18.00 18.50 19.00 19.50 20.00 20.50 21.00 21.50
Abundance
                                                        TIC: 031406_09.D
                                                             26.27
  600000
  500000
  400000
  300000
  200000
                                                                        27.18
                                                                        27,47,3142
  100000
Time--> 22.00 22.50 23.00 23.50 24.00 24.50 25.00 25.50 26.00 26.50 27.00 27.50 28.00 28.50 29.00 29.50 30.00
```

Page: 2

Tentativalpradenseared Compound Rasortsummary

/DBssapgshh::CC/MMDDDbmm/1/DDMAAD006FEB\$0935865/

DEataFf1ee::0834966099DD

AAqqOfin ::166MMar20066 44227amm Opperator ::AAF

Samphee ::066966111 MMssc ::580MMLAA277

AABSVŸāāl ::33 SampþèeMMùttpþleer:11

QQaantMMehbdd::CC/MMBDHBMM1/MMEHHDB\$TOO58028885MM

QQuantTTttee ::

TTCCLLbbaayy :: CC\DAMBRAEENUSSW02LL TTCCImneggationnParammeters: liscintee

|--Internal Standard---| TIC Top Hit name RT EstConc Units Response # RT Resp Conc

No Library Search Compounds Detected *****************

Sample Information

Run Information

Inlet Position: 4

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std. : Yes

sample Type : Sample

Cryofocus : Yes

Analysis Type : Low Level

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406_10.D

: 16 Mar 2006 5:29 am Acq On

Operator : AF

Sample : 06-061-1 DUP

Misc : 500ML A217 ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: lscint.e

Integrator: ChemStation

Smoothing : OFF Filtering: 5

Sampling : 1 Min Arca: 5 % of largest Peak

Start Thrs: 0.2 Max Peaks: 100 Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >

Peak separation: 5

: C:\MSDCHEM\1\METHODS\T015021805.M

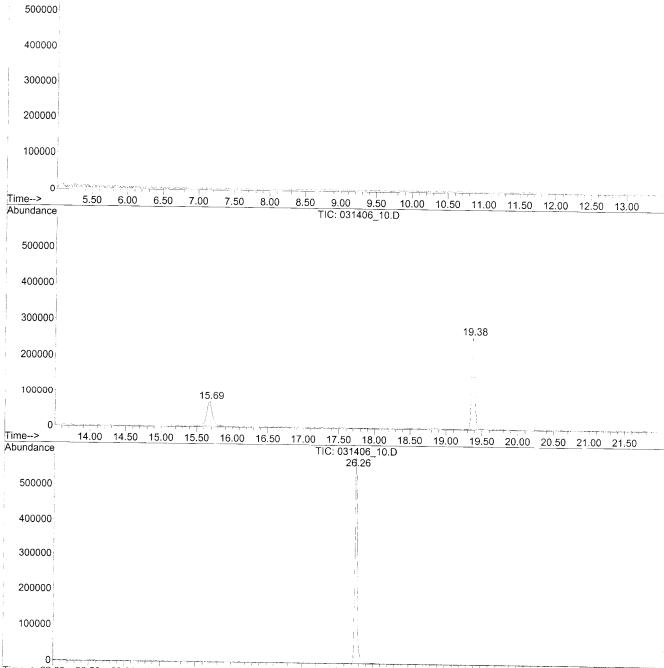
Title

Signal : TIC

peak R.T. first max last PK peak corr. corr. % of # min scan scan scan TY height area % max. total peak R.T. first max last PK peak 1 15.687 1350 1373 1392 BV 3 69994 4012973 31.85% 16.487% 2 19.383 1733 1746 1761 BB 253767 7727808 61.34% 31.749% 3 26.259 2433 2441 2471 BV 2 590199 12599288 100.00% 51.764%

Sum of corrected areas: 24340068

LSC Report - Integrated Chromatogram Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\ Data File : 031406 10.D Acq On : 16 Mar 2006 5:29 am Operator : AF Sample : 06-061-1 DUP Misc : 500ML A217 ALS Vial : 4 Sample Multiplier: 1 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M Quant Title TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e Abundance TIC: 031406_10.D 500000 400000 300000 200000 100000 Time--> 5.50 6.00 6.50 7.00 7.50 8.00 8.50 9.00 9.50 Abundance TIC: 031406_10.D 500000



Time--> 22.00 22.50 23.00 23.50 24.00 24.50 25.00 25.50 26.00 26.50 27.00 27.50 28.00 28.50 29.00 29.50 30.00 P015021805.M Mon Mar 20 16:16:18 2006 RPT1

Page: 2

Tentativalpradenseared Compound Rasortsummary

DBttaPBth::CC/MMBDChmhllDAMA1006FEEb0015866/

DBaaaFf1de::0034966100DD

AAqq0fin ::166MH π r20066 55299a π m Opperator ::AFF

AASSVVaal::44 SampheeMMultiphleer:11

QQaantMMehbdd::CC\MMBDHRMM\\MMEHHDB\$\TOO\$6028665MM

QQuantTTite ::

TTCCLLbbarky :: CC\DMMBBBEENUSST02LL TTCCImneggaatonnPaaaameeess: lsscintee

--Internal Standard---TIC Top Hit name RT EstConc Units Response # RT Resp Conc

No Library Search Compounds Detected

021805.M Mon Mar 20 16:16:18 2006 RPT1

Sample Information

Run Information

Inlet Position: 4

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std. : Yes

Sample Type : Sample

Cryofocus: Yes

Analysis Type : Low Level

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

LSC Area Percent Report

Data Path : C:\MSDChcm\1\DATA\2006_FEB\031506\

Data File : 031406_11.D

Acq On : 16 Mar 2006 6:32 am

Operator : AF

Sample : 06-061-2

Misc : 500ML B235 ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: lscint.e

Integrator: ChemStation

Smoothing : OFF Filtering: 5

Min Area: 5 % of largest Peak Sampling : 1

Start Thrs: 0.2 Max Peaks: 100 Stop Thrs : 0 Peak Location: TOP

if leading or trailing edge < 100 prefer < Baseline drop else tangent >

Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M

Title

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
+ -+									
141	15.702	1342	1374	1398	PV 2	83984	4738064	33.44%	17.065%
2	19.308	1729	1738	1740	PV	14433	373315	2.64%	1.345%
3	19.388	1740	1746	1767	VV	253149	8486021	59.90%	30.564%
4	26.268	2433	2442	2473	BB 2	669320	14167408	100.00%	51.026%

Sum of corrected areas: 27764809

LSC Report - Integrated Chromatogram Data Path : C:\MSDChcm\1\DATA\2006_FEB\031506\ Data File : 031406_11.D Acq On : 16 Mar 2006 6:32 am Operator : AF : 06-061-2 Sample Misc : 500ML B235 ALS Vial : 5 Sample Multiplier: 1 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M Quant Title TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e Abundance TIC: 031406 11.D 600000 500000 400000 300000 200000 100000 5.50 7.00 7.50 8.00 8.50 9.00 9.50 10.00 10.50 11.00 11.50 12.00 12.50 13.00 Time--> 6.00 6.50 Abundance TIC: 031406_11.D 600000 500000 400000 300000 19.39 200000 15.70 100000 19.30 Time--> 13.50 14.00 14.50 15.00 15.50 16.00 16.50 17.00 17.50 18.00 18.50 19.00 19.50 20.00 20.50 21.00 21.50 TIC: 031406_11.D Abundance 26.27 600000 500000 400000 300000 200000 100000

Time--> 22.00 22.50 23.00 23.50 24.00 24.50 25.00 25.50 26.00 26.50 27.00 27.50 28.00 28.50 29.00 29.50 30.00 Page: 2

Tentativblpradenseared Compound RbpOrtsummary

Даранаранћа::СС/Минопиниј/Димжу7000-еевроятене/

Dbaaafflee::0014466111DD

AAqqonn ::166MHar20066 66322amm Oppeaboor ::AAF

QqaahtMMehbdd::CC\MMBDHHMM\\MHEHBDB\$TOO58228885MM

QuantTTite ::

TTCCLLbbaayy :: CC\DAMBREEENUSST02LL TTCCInneggaatonnPaaammeeess:lsscintee

--Internal Standard---TIC Top Hit name RT EstConc Units Response # RT Resp Conc

No Library Search Compounds Detected

Sample Information

Run Information

Sample Name: 061-2 B235 031506 11

Inject Time : 04:03:21

Inlet Position :

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP LCI.MTH

Int. Std. : Yes

Sample Type : Sample

Cryofocus: Yes

Analysis Type : Low Level

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406_12.D

Acq On : 16 Mar 2006 7:34 am Operator : AF

Sample : 06-061-3 Misc : 500ML A230

ALS Vial : 6 Sample Multiplier: 1

Integration Parameters: lscint.e

Integrator: ChemStation

Smoothing : OFF Filtering: 5

Sampling : 1 Min Arca: 5 % of largest Peak

Start Thrs: 0.2 Max Peaks: 100 Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >

Peak separation: 5

: C:\MSDCHEM\1\METHODS\TO15021805.M Method

Title

Signal : TIC

peak	R.T. min	first scan	max scan	last scan	PK TY		peak height	corr. area	corr. % max.	% of total
								4229067		
2	18.911	1678	1698	1717	PΒ	2	231206	8053827	64.88%	32.611%
3	26.173	2426	2432	2459	BV		578828	12413431	100.00%	50.264%

Sum of corrected areas: 24696325

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

```
Data File : 031406_12.D
             : 16 Mar 2006
 Acq On
                                7:34 am
 Operator : AF
 Sample
             : 06-061-3
             : 500ML A230
 Misc
 ALS Vial : 6 Sample Multiplier: 1
 Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
 Quant Title
 TIC Library : C:\DATABASE\NIST02.L
 TIC Integration Parameters: lscint.e
                                                     TIC: 031406 12.D
    Abundance
      500000
      400000
      300000
      200000
      100000
                5.50 6.00
                                           8.00
                                                      9.00 9.50 10.00 10.50 11.00 11.50 12.00 12.50 13.00
    Time-->
                           6.50
                                7.00
                                      7.50
                                                 8.50
                                                     TIC: 031406_12.D
    Abundance
      500000
      400000
      300000
                                                                       18.91
      200000
      100000
                          14.93
    Time-->
               14.00 14.50 15.00 15.50 16.00 16.50 17.00 17.50 18.00 18.50 19.00 19.50 20.00 20.50 21.00 21.50
                                                     TIC: 031406_12.D
    Abundance
                                                         26.17
      500000
      400000
      300000
      200000
      100000
               22.50 23.00 23.50 24.00 24.50 25.00 25.50 26.00 26.50 27.00 27.50 28.00 28.50 29.00 29.50 30.00
T015021805.M Mon Mar 20 16:18:07 2006 RPT1
                                                                                                   Page. 2
```

Tentativblbradenseare Compound Rasortsummary

DBabaPBbhh::CC/MEDDBbmhllDAXXA20066FEBBQ015866/

DBaaaFf1&e::0014466122DD

A&qq00n ::156MMar20066 77334amm

Opperator :: AAF

\$\$ampde ::066066133 Minisc ::560MMLA2200

AASSVVaal ::66 SamppeeMMultippleer:11

QQaabtMMehbdd::CC\MMBDHHMM\\MMEHHDB\TOO\$6028665MM

QQaantTTttee ::

TTCCLLbbasyy :: CC\\nmmareeen\ussu2ll TTCCImheggasionnPassmeeess: lscimhtee

|--Internal Standard---|
TIC Top Hit name RT EstConc Units Response |# RT Resp Conc

No Library Search Compounds Detected

Sample Information

Run Information

Inlet Position : 6

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP LCI.MTH

Int. Std. : Yes

Sample Type : Sample

Cryofocus: Yes

Analysis Type : Low Level

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406_13.D

8:22 am

Acq On : 16 Mar 2006 Operator : AF : 06-061-4 20X : 25ML C135 Sample Misc

ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

Quant Title :

TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e

TIC Top Hit name	RT	EstConc	Units	Response		-Intern	al Standa Resp	rd Conc
Cyclobutane, methyl-	12.30	5.4	ppbV	2961760	1	15.26	5447010	10.0
1-Methoxy-2,3-cis	12.87	8.5	ppbV	4632990	1	15.26	5447010	10.0
1,3-Propanediamin	19.46	6.2	ppbV	6119020	2	19.31	9895060	10.0
Cyclohexane, methyl-	22.17	6.4	ppbV	6347920	2	19.31	9895060	10.0
Octane	25.22	9.7	ppbV	19770500	3	26.27	20439000	10.0
###thyl-4-methylc	27.88	6.3	ppbV	12801500	3	26.27	20439000	10.0
Nonane	28.06	15.2	ppbV	30962000	3	26.27	20439000	10.0
1 Ethyl-4-methylc	28.39	6.4	ppbV	13153600	3	26.27	20439000	10.0
Cyclohexane, propyl-	28.92	5.8	ppbV	11833600	3	26.27	20439000	10.0
1RalphaPinene	29.07	97.8	ppbV	199971000	3	26.27	20439000	10.0
.betaPinene	30.01	10.0	ppbV	20371100	3	26.27	20439000	10.0
Decane	30.27	9.5	ppbV	19498200	3	26.27	20439000	10.0
M_1								

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

8:22 am

Data File : 031406 13.D

Acq On : 16 Mar 2006

Operator : AF

: 06-061-4 20X Sample : 25ML C135 Misc

ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

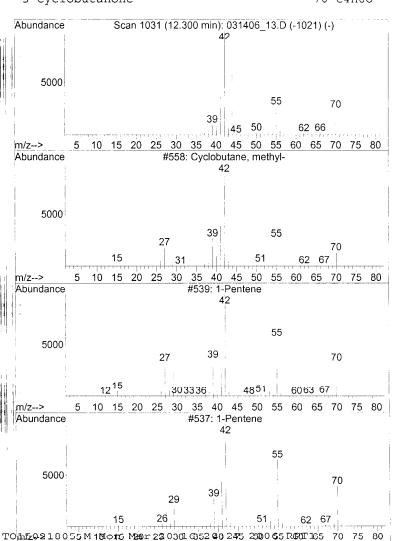
Quant Title :

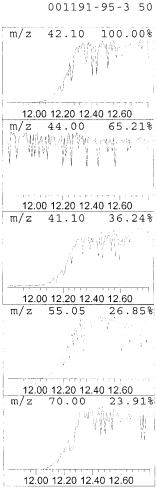
TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e

Peak Number 7 Cyclobutane, methyl-Concentration Rank 25

R.T.	EstConc	Area	Relative to ISTD	R.T.
-				
12.30	5.44 ppbV	2961760	Bromochloromethane	15.26

Н	it# of 5 Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclobutane, methyl-	70	C5H10	000598-61-8	58
2	1-Pentene	70	C5H10	000109-67-1	. 53
. 3	1-Pentene	70	C5H10	000109-67-1	. 50
4	Cyclobutane, methyl-	70	C5H10	000598-61-8	5.0
5	Cvclobutanone	70	C4H60	001191-95-3	5.0









```
Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\
 Data File : 031406 13.D
 Acq On : 16 Mar 2006
                         8:22 am
 Operator : AF
 Sample : 06-061-4 20X
 Misc
          : 25ML C135
 ALS Vial : 7 Sample Multiplier: 1
 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
 Quant Title :
 TIC Library : C:\DATABASE\NIST02.L
 TIC Integration Parameters: lscint.e
 ******************
 Peak Number 10 1-Methoxy-2,3-cis-dimethyla... Concentration Rank 9
   R.T. EstConc
                          Area
                                    Relative to ISTD
                                                               R.T.
                        ______
  12.87 8.51 ppbV 4632990 Bromochloromethane 15.26
                                       MW MolForm CAS#
  Hit# of 5 Tentative ID
                                                                    Qual
  .-------
  1 1-Methoxy-2,3-cis-dimethylazirid... 101 C5H11NO 061593-25-7 64
2 1-Methoxy-2,3-trans-dimethylazir... 101 C5H11NO 1000283-23-4 50
3 Butane, 2,3-dimethyl- 86 C6H14 000079-29-8 35
  4 Pentane, 2-methyl-
                                        86 C6H14
                                                         000107-83-5 25
  5 2-Acetylpyrrolidine
                                        113 C6H11NO
                                                         060026-20-2 17
              Scan 1089 (12.874 min): 031406 13.D (-1083) (-)
                                                  m/z 70.05 100.00%
                                                   上 "精节的"是"电视"的"操作"。
                                                     TANGET BELLEVIEW
     5000
                                                       12.60 12.80 13.00 13.20
                                                     m/z 42.10 96.92%
         52 63 86
0 10 20 30 40 50 60 70 80 90
              #4049: 1-Methoxy-2,3-cis-dimethylaziridine (sin)
 Abundance
                                                        12.60 12.80 13.00 13.20
                                                      m/z 43.10 59.89%
     5000
                    29
         0 10 20 30 40 50 60 70 80 90 100
 m/7-->
                #4048: 1-Methoxy-2,3-trans-dimethylaziridine
 Abundance
                                                        12.60 12.80 13.00 13.20
                         42
                                                      m/z 39.10 31.33%
     5000
                    29
                                                        12.60 12.80 13.00 13.20
                                                                   28.38%
                                                      m/z 71.10
         0 10 20 30 40 50 60 70 80 90 100
 m/z-->
                    #1806: Butane, 2,3-dimethyl-
  Abundance
                         43
                                                        12.60 12.80 13.00 13.20
     5000
TO 11/2-0-21805. NO Moto Mater 230 140 205027 62 0070 RB 1 90 100
```

Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\ Data File : 031406 13.D Acg On : 16 Mar 2006 8:22 am Operator : AF Sample : 06-061-4 20X : 25ML C135 Misc ALS Vial : 7 Sample Multiplier: 1 Quant Method: C:\MSDCHEM\1\METHODS\T015021805.M Ouant Title : TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e ******************* Peak Number 14 1,3-Propanediamine, N-methyl- Concentration Rank 17 4 N-Methylallylamine 000627-37-2 23 71 C4H9N 5 Pentane, 1,3-epoxy-4-methyl- 100 C6H12O 015045-60-0 22 Scan 1754 (19.463 min): 031406_13.D (-1752) (-) Abundance m/z 43.10 100.00% 5000 71 19.20 19.40 19.60 19.80 m/z 41.10 50 32 10 20 30 40 50 60 70 80 90 100 #2182: Hydroxylamine, O-(2-methylpropyl)-19.20 19.40 19.60 19.80 57 m/z 57.10 72.51% 5000 50 0 10 20 30 40 50 60 70 80 Abundance #1954: 1,3-Propanediamine, N-methyl-19.20 19.40 19.60 19.80 m/z 44.00 69.05% 30 5000 56 18 19.20 19.40 19.60 19.80 19.20 19.40 10 10 20 30 40 50 60 70 80 90 100 m/z 42.10 10 20 #3907: Pentane, 2,3-dimethyl-Abundance 43 56 29 19.20 19.40 19.60 19.80 5000 63 78 85 TO th 5-021805. NO Moto Moto Moto 200 160205028 600000 RISO1 90 100

```
Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\
  Data File : 031406 13.D
  Acq On : 16 Mar 2006
Operator : AF
                          8:22 am
  Sample : 06-061-4 20X
Misc : 25ML C135
  ALS Vial : 7 Sample Multiplier: 1
  Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
  Quant Title :
  TIC Library : C:\DATABASE\NIST02.L
  TIC Integration Parameters: lscint.e
  Peak Number 15 Cyclohexane, methyl-
                                         Concentration Rank 15
                          Area Relative to ISTD
   R.T. EstConc
   22.17 6.42 ppbV 6347920 1,4-difluorobenzene 19.31
   Hit# of 5 Tentative ID
                                       MW MolForm CAS#
   .
   1 Cyclohexane, methyl-
                              98 C7H14000108-87-2 9498 C7H14000108-87-2 91
   2 Cyclohexane, metnyı-
3 Cyclohexane, methyl-
                                       98 C7H14
                                                        000108-87-2 91
   4 Cyclohexane, methyl- 98 C7H14
5 1H-Pyrazole, 3-ethyl-4,5-dihydro- 98 C5H10N2
                                                        000108-87-2 90
                                                         005920-29-6 64
           Scan 2027 (22.169 min): 031406_13.D (-2008) (-) m/z 83.10 100.00%
  Abundance
                                            98
     5000
                                                    21.80 22.00 22.20 22.40
                                                    m/z 55.10 70.98%
           0 10 20 30 40 50 60 70 80 90 100
  Abundance
                    #3276: Cyclohexane, methyl-
     5000
                                                     m/z 98.10 54.45%
                    27
                   _____62
  m/z-->
         0 10 20 30 40 50 60 70 80 90 100
                    #3281: Cyclohexane, methyl-
  Abundance
                                                     21.80 22.00 22.20 22.40
                                       83
                                                     m/z 41.10
                                                                 40.79%
                                            98
                                  69
                    27 62 76 91
30 40 50 60 70 80 90 100
                                                     21.80 22.00 22.20 22.40
                                       91
                                                     m/z 56.10 22.69%
 m/z--> 0 10 20
Abundance
                    #3280: Cyclohexane, methyl-
                              55
     5000
                                                   21.80 22.00 22.20 22.40
                                            98
                            _____62
TOmb 021805 MO MO10 M20 230 164020508 6000 60 RP 001 90 100
```

Page: 11

Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\ Data File : 031406 13.D Acq On : 16 Mar 2006 8:22 am Operator : AF Sample : 06-061-4 20X : 25ML C135 Misc ALS Vial : 7 Sample Multiplier: 1 Quant Method: C:\MSDCHEM\1\METHODS\T015021805.M Quant Title : TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e ***************** Peak Number 17 Octane Concentration Rank 6 Area Relative to ISTD R.T. EstConc 25.22 9.67 ppbV 19770500 chlorobenzene-d5 26.27 2 43.10 100.00% Hit# of 5 Tentative ID MW MolForm CAS# Qual -----114 C8H18 000111-65-9 59 128 C9H20 002213-23-2 53 2 Heptane, 2,4-dimethyl-128 C9H2O 3 Heptane, 2,4-dimethyl-114 C8H18 4 Octane 5 Heptane, 2,4-dimethyl-128 C9H2O Scan 2334 (25.221 min): 031406_13.D (-2325) (-) m/z 43.10 100.00% 5000 25.00 25.20 25.40 25.60 112 m/z 85.10 46.34% 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 Abundance #7425: Octane 25.00 25.20 25.40 25.60 m/z 41.10 39.95% 5000 71 85 ┍╫╍┯┈╣╌┄╶╟╌╌╶╟╒╌╾╼┯╌ m/z--> 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170
Abundance #12284: Heptane, 2,4-dimethyl-#12284: Heptane, 2,4-dimethyl-25.00 25.20 25.40 25.60 m/z 56.10 31.20% 5000 25.00 25.20 25.40 25.60 99 113 128 m/z 57.10 30.35% 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 Abundance #12273: Heptane, 2,4-dimethyl-25.00 25.20 25.40 25.60 5000 99 113 128 15 TO THE 0.2 18050 M20M30 40a 50 200 706 80090 9000100 620 PD 1140 150 160 170 Page: 12

Library Search Compound Report Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\ Data File : 031406 13.D Acq On : 16 Mar 2006 8:22 am Operator : AF Sample : 06-061-4 20X : 25ML C135 Misc ALS Vial : 7 Sample Multiplier: 1 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M Quant Title : TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e ************** Peak Number 19 1-Ethyl-4-methylcyclohexane Concentration Rank 16 Area Relative to ISTD R.T. EstConc _____ JUKUONUU 27.88 6.26 ppbV 12801500 chlorobenzene-d5 26.27 Hit# of 5 Tentative ID MW MolForm CAS# Qual 1 1-Ethyl-4-methylcyclohexane 126 C9H18 003728-56-1 91 2 cis-1-Ethyl-3-methyl-cyclohexane 126 C9H18 019489-10-2 91 3 1-Ethyl-3-methylcyclohexane (c,t) 126 C9H18 003728-55-0 91 034379-54-9 80 004926-78-7 78 4 Furan, 2,3-dihydro-4-(1-methylpr... 126 C8H140 5 Cyclohexane, 1-ethyl-4-methyl-, ... 126 C9H18 Scan 2608 (27.878 min): 031406_13.D (-2605) (-) m/z 97.10 100.00% 55 5000 27.60 27.80 28.00 28.20 126 41 ! 69 m/z 55.00 45.36% 111 10 20 30 40 50 60 70 80 90 100 110 120 130 #11214: 1-Ethyl-4-methylcyclohexane Abundance 55 27.60 27.80 28.00 28.20 m/z 126.20 19.54% 5000 126 10 20 30 40 50 60 70 80 90 100 110 120 130 #11249: cis-1-Ethyl-3-methyl-cyclohexane 27.60 27.80 28.00 28.20 Abundance m/z 41.10 15.30% 5000 126 27.60 27.80 28.00 28.20 111 m/z 96.10 10 20 30 40 50 60 70 80 90 100 110 120 130 #11251: 1-Ethyl-3-methylcyclohexane (c,t) Abundance

126

5000

27.60 27.80 28.00 28.20

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406_13.D

Acq On : 16 Mar 2006 8:22 am

Operator : AF

Sample : 06-061-4 20X Misc : 25ML C135

ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

Quant Title :

TIC Library : C:\DATABASE\NISTO2.L TIC Integration Parameters: lscint.e

			Parameters		e .******	*****	*****	***
	Peak Num	mber 20 N	Nonane			Concentra	tion Ran	ık 2
	R.T.	EstConc		Area	Relative	to ISTD	R.	Т.
	28.06	15.15 pr	pbV 30	962000	chlorobenz	ene-d5	26	5.27
	Hit# of	5 Te	entative I	D	MW Mo	lForm	CAS#	Qual
	1 Nonar 2 Nonar 3 Nonar 4 Octar 5 Nonac	ne ne ne			128 C9H 128 C9H 128 C9H 128 C9H 114 C8H 268 C19	20 20 18	000111- 000111- 000111-	84-2 94 84-2 94 84-2 76 65-9 72 92-5 59
	Abundance	Scan	2627 (28.062 m 43 57	nin): 031406_1	3.D (-2620) (-)	m/z	57.10	100.00%
-	5000			85 71		27	.80 28.00 28	,20 28.40
	m/z> Abundance	10 20 30	40 50 60 #122 43	70 80 90 251: Nonane	99 12 111 100 110 120 1	28 m/z		96.28%
	5000			0.5			7.80 28.00 28 85 . 10	
	m/z>	29 15 10 20 30		71 85 70 80 90 252: Nonane	99 12	130	7.80 28.00 28	20 28 40
			43 57			m/z		50.89%
	5000	29		71 85	99 113 ¹²		7.80 28.00 28 71.10	3.20 28.40 30.90%
-000	m/z> Abundance	10 20 30	40 50 60 #12 43 57) 100 110 120 1	130		
	5000					2	7.80 28.00 28	3.20 28.40
-		29		71 85	99 12	28		

On 5-0-2180510M 200 n 30 Ma # 0 2 00 1 60 2 0 7 0 3 580 2 0 90 5 160 P T 11 1 0 120 130

Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\ Data File : 031406_13.D Acq On : 16 Mar 2006 8:22 am Operator : AF Sample : 06-061-4 20X Misc : 25ML C135 ALS Vial : 7 Sample Multiplier: 1 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M Ouant Title : TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e ************** Peak Number 21 1-Ethyl-4-methylcyclohexane Concentration Rank 14 Relative to ISTD Area R.T. EstConc ______ 28.39 6.44 ppbV 13153600 chlorobenzene-d5 26.27 MW MolForm CAS# Qual Hit# of 5 Tentative ID _____ 1 1-Ethyl-4-methylcyclohexane 126 C9H18 003728-56-1 81 2 cis-1-Ethyl-3-methyl-cyclohexane 126 C9H18 019489-10-2 76 006236-88-0 68 3 Cyclohexane, 1-ethyl-4-methyl-, ... 126 C9H18 059643-68-4 68 126 C9H18 4 3,5-Dimethyl-3-heptene 5 1-Ethyl-3-methylcyclohexane (c,t) 126 C9H18 003728-55-0 68 m/z 97.10 100.00% Scan 2661 (28.392 min): 031406 13.D (-2651) (-) Abundance 5000 28.00 28.20 28.40 28.60 28.80 m/z 55.10 93.84% 111 140 m/z--> 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 Abundance #11214: 1-Ethyl-4-methylcyclohexane 55 28.00 28.20 28.40 28.60 28.80 m/z 69.10 52.80% 5000 126 81 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 28.00 28.20 28.40 28.60 28.80 #11249: cis-1-Ethyl-3-methyl-cyclohexane m/z 41.05 36.64% 5000 126 28.00 28.20 28.40 28.60 28.80 m/z 125.10 27.93% 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 #11264: Cyclohexane, 1-ethyl-4-methyl-, trans-55 28.00 28.20 28.40 28.60 28.80 5000 126 81 | 111 TO由于02180至0M30M340 50a160270 156:9001000912120093001450160170180

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406 13.D

: 16 Mar 2006 8:22 am Acq On Operator : AF Sample : 06-061-4 20X : 25ML C135 Misc ALS Vial : 7 Sample Multiplier: 1 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M Quant Title : TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e ***************** Peak Number 22 Cyclohexane, propyl-Concentration Rank 20 Relative to ISTD Area R.T. EstConc ______ 28.92 5.79 ppbV 11833600 chlorobenzene-d5 26.27 Hit# of 5 Tentative ID MW MolForm CAS# Qual Hit# of 5 Tentative ID 1 Cyclohexane, propyl- 126 C9H18 001678-92-8 81 2 Cyclohexane, propyl- 126 C9H18 001678-92-8 76 2 Cyclohexane, propyl3 Cyclohexane, propyl4 Cyclohexane, propyl5 Cyclohexane, propyl-001678-92-8 76 126 C9H18 001678-92-8 74 126 C9H18 126 C9H18 001678-92-8 59 5 Cyclohexane, propylm/z 83.10 100.00% Scan 2716 (28.925 min): 031406 13.D (-2709) (-) 55 5000 28.60 28.80 29.00 29.20 113 142 m/z 55.10 87.48% 63 m/z--> 10 20 30 40 50 60 70 80 90 100 110 120 130 140 Abundance #11171: Cyclohexane, propyl-55 83 28.60 28.80 29.00 29.20 m/z 82.10 56.52% 5000 126 10 20 30 40 50 60 70 80 90 100 110 120 130 140 #11177: Cyclohexane, propyl-28.60 28.80 29.00 29.20 Abundance m/z 41.10 34.18% 5000 126 28.60 28.80 29.00 29.20 15 m/z 97.10 10 20 30 40 50 60 70 80 90 100 110 120 130 140 m/z--> #11176: Cyclohexane, propyl-Abundance 28.60 28.80 29.00 29.20 5000 126 165-9-2 180 510M 200 0130 Mate 30 66 : 200 : 207 900 0 60 R10 120 130 140

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406_13.D

: 16 Mar 2006 8:22 am Acq On

Operator : AF

: 06-061-4 20X Sample : 25ML C135 Misc

ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

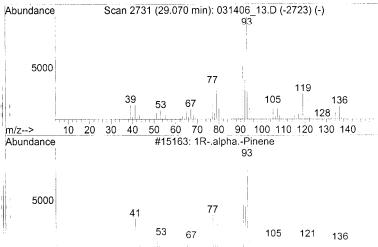
Quant Title :

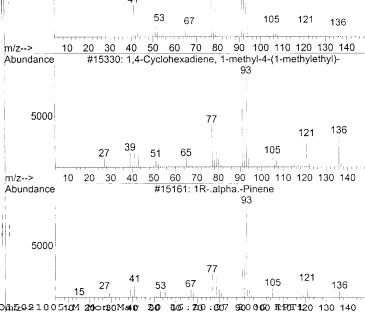
TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e

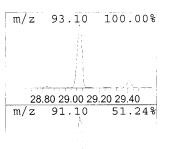
Concentration Rank 1 Peak Number 23 IR-.alpha.-Pinene

EstConc	Area	Relative to ISTD	R.T.
		chlorobenzene-d5	26.27

Hit# of 5 Tentative ID	MW	Molform	CAS#	Qual -
1 1RalphaPinene 2 1,4-Cyclohexadiene, 1-methyl-4-(C10H16	007785-70-8	
3 1RalphaPinene	136	C10H16	007785-70-8	3 93
4 Bicyclo[3.1.1]hept-2-ene, 2,6,6 5 Tricyclo[2.2.1.0(2,6)]heptane, 1			002437-95-8 000488-97-3	









a finene

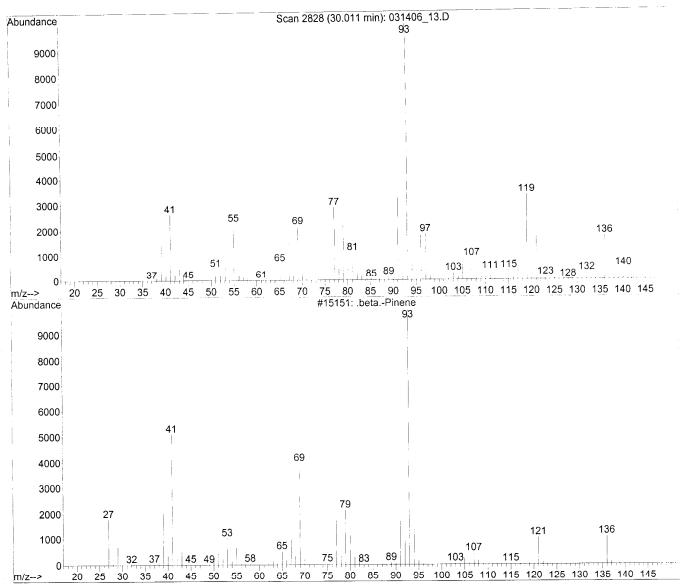
28.80 29.00 29.20 29.40

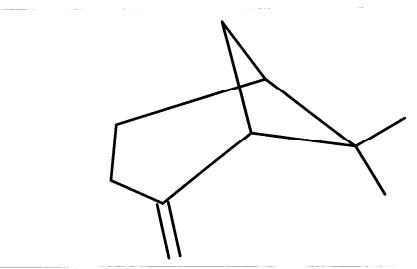
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Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\
Data File : 031406 13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1
Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
Ouant Title :
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e
Concentration Rank 5
Peak Number 24 .beta.-Pinene
                         Area
                                   Relative to ISTD
  R.T. EstConc
 ______
 30.01 9.97 ppbV 20371100 chlorobenzene-d5
                                                             26.27
                                      MW MolForm CAS# Qual
 Hit# of 5 Tentative ID
                                 ______
 1 Bicyclo[2.2.1]hept-2-ene, 1,7,7-... 136 C10H16 000464-17-5 76 2 Bicyclo[3.1.0]hexane, 4-methylen... 136 C10H16 003387-41-5 76
 2 Bicyclo[3.1.0]hexane, 4-methylen... 136 C10H16
                                                        000080-56-8 76
                                      136 C10H16
 3 .alpha.-Pinene
                                      136 C10H16
                                                        000127-91-3 70 \
 4 .beta.-Pinene
                                                                        See Nex1
page
For spector
                                                         000555-10-2 68
 5 .beta.-Phellandrene
                                      136 C10H16
             Scan 2828 (30.011 min): 031406_13.D (-2822) (-)
                                                  m/z 93.10 100.00%
   5000
                                      119
                                      136
                                                   29.60 29.80 30.00 30.20 30.40
              41 55 69
                          107 128
                                                   m/z 119.10 33.63%
       20 30 40 50 60 70 80 90 100 110 120 130 140
             #15295: Bicyclo[2.2.1]hept-2-ene, 1,7,7-trimethyl-
Abundance
                              93
                                      121
                                                   29.60 29.80 30.00 30.20 30.40
                                                    m/z 91.05 32.10%
    5000
                                           136
                53 65
                بالناب ورواءاري ووبابلك وبيا
       20 30 40 50 60 70 80 90 100 110 120 130 140
Abundance #15353: Bicyclo[3.1.0]hexane, 4-methylene-1-(1-methylethyl)-
                                                   29.60 29.80 30.00 30.20 30.40
                                                    m/z 77.05 28.30%
    5000
                              105 121 136
                                                   29.60 29.80 30.00 30.20 30.40 m/z 79.10 20.63%
        20 30 40 50 60 70 80 90 100 110 120 130 140
m/z-->
                    #15156: .alpha.-Pinene
 Abundance
                                                    29.60 29.80 30.00 30.20 30.40
    5000
                                 105
http=02180520M 3000n40Ma560 200 160 2060 3800 20006 1170P 7120 130 140
                                                                                  Page: 18
```

Library Searched : C:\Database\NIST02.L

Quality : 76

: .beta.-Pinene





```
Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406 13.D
      : 16 Mar 2006 8:22 am
Acg On
Operator : AF
Sample : 06-061-4 20X
      : 25ML C135
Misc
ALS Vial : 7 Sample Multiplier: 1
Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
Ouant Title :
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e
***************
Peak Number 25 Decane
                                           Concentration Rank 7
                     Area Relative to ISTD
                                                        R.T.
  R.T. EstConc
 30.27 9.54 ppbV 19498200 chlorobenzene-d5
                                                        26.27
                                   MW MolForm CAS# Qual
 Hit# of 5 Tentative ID
                                    ______
                                   142 C10H22 000124-18-5 90
142 C10H22 000124-18-5 87
 1 Decane
 2 Decane
                                    142 C10H22
                                                    000124-18-5 81
 3 Decane
                                                    000629-59-4 80
                                    198 C14H30
 4 Tetradecane
                                    226 C16H34
                                                     000544-76-3 72
 5 Hexadecane
           Scan 2855 (30.272 min): 031406_13.D (-2849) (-)
                                                m/z 57.10 100.00%
               43 57
                      71
   5000
                         85
                                                 30.00 30.20 30.40 30.60
                                                 m/z 43.10 85.60%
                      99 113 127 154
1 154
      10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160
Abundance
                     #18418: Decane
                                                 30.00 30.20 30.40 30.60
                                                 m/z 71.10 66.43%
    5000
                         85
                        99 113 126 142
       10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160
                      #18419: Decane
                                                  30.00 30.20 30.40 30.60
 Abundance
               43
                                                 m/z 41.10
                                                             49.43%
   5000
            29
                                                   30.00 30.20 30.40 30.60
                             99 113
                                      142
                                                 m/z 85.10
      10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160
 Abundance
                      #18421: Decane
               43
                                                30.00 30.20 30.40 30.60
    5000
                         85
            29
                            99 113
```

TOME 1805 0 M201030 14er5020501 60200 390 2000 150 R2C 130 140 150 160

Page: 19

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406 13.D

Acg On : 16 Mar 2006 8:22 am

Operator : AF

Sample : 06-061-4 20X Misc : 25ML C135

ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: lscint.e

Integrator: ChemStation

Smoothing : OFF Filtering: 5

Sampling : 1 Min Arca: 5 % of largest Peak

Start Thrs: 0.2 Max Peaks: 100 \$top Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent > Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\T015021805.M

Title

Signal : TIC

1	peak #	R.T. min	tirst scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
	1 2 3 4 5	5.076 5.126 5.215 5.245 5.294	299 305 314 318 322	302 307 316 319 324	305 314 318 322 326	BV PV PV VV	290011 238232 168002 105628 145266	4411318 3742887 2017722 2042539 1823583	2.21% 1.87% 1.01% 1.02% 0.91%	0.298% 0.253% 0.136% 0.138% 0.123%
	6 7 8 9	5.324 5.374 5.473 5.522 5.552	326 331 341 344 349	327 332 342 347 350	331 341 344 349 358	PV VV PV	129914 149524 119491 145181 120094	1938201 5921555 1029943 2282673 5749561	0.97% 2.96% 0.52% 1.14% 2.88%	0.131% 0.400% 0.070% 0.154% 0.388%
	12 13 14 15	5.651 5.710 5.800 5.879 5.948	358 365 374 381 385	360 366 375 383 390	365 374 381 385 395	VV PV VV	99806 89297 72127 80736 74049	2513284 2786812 1844568 1081799 2987553	1.26% 1.39% 0.92% 0.54% 1.49%	0.170% 0.188% 0.125% 0.073% 0.202%
	18	6.018 6.097 6.136 6.166 6.196	395 401 406 410 414	397 405 409 412 415		VV VV 2 VV	60299 33036 80024 63194 40172	1523079 547096 1253048 925821 461203	0.76% 0.27% 0.63% 0.46% 0.23%	0.103% 0.037% 0.085% 0.063% 0.031%
	22 23 24	6.255 6.325 6.364 6.424 6.543	417 426 429 437 440	421 428 432 438 450	429 437	VV VV	50804 43799 73125 60863 54716	1380661 531563 2119814 550871 2789201	0.69% 0.27% 1.06% 0.28% 1.39%	0.093% 0.036% 0.143% 0.037% 0.188%
	27 28 29	6.582 6.632 6.672 6.761 6.800	452 457 462 470 474	454 459 463 472 476		VV VV VV	62420 58700 62076 50722 50561	1203181 1176563 2146306 817870 820075	0.60% 0.59% 1.07% 0.41% 0.41%	0.081% 0.079% 0.145% 0.055% 0.055%
	32 33 34	6.840 6.919 6.999 7.058 7.137	478 486 490 500 504	480 488 496 502 510	490 500	VV VV	51332 22821 52264 31757 44203	1256712 269510 1621296 361708 1077099	0.63% 0.13% 0.81% 0.18% 0.54%	0.085% 0.018% 0.109% 0.024% 0.073%

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406_13.D

Acq On : 16 Mar 2006 8:22 am

Operator : AF

| Sample : 06-061-4 20X | Misc : 25ML C135

ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: lscint.e

Integrator: ChemStation

Smoothing: OFF Filtering: 5

Sampling : 1 Min Area: 5 % of largest Peak

Start Thrs: 0.2 Max Peaks: 100 Stop Thrs: 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent > Peak separation: 5

reak separation: 5

Method : C:\MSDCHEM\1\METHODS\T015021805.M

Title :

36	7.167	511	513		VV		54936	748087	0.37%	0.051%
37	7.207	515	517		VV	2	49591	932663	0.47%	0.063%
38 39	7.226	518	519	522	VV		49356	724473	0.36%	0.049%
139	7.345	522	531	533	VV		62364	3005633	1.50%	0.203%
40	7.385	533	535	538	VV		58781	1257969	0.63%	0.085%
41	7.444	538	541	544	7,77,7		61047	1591868	0.80%	0 1079
42	7.504	544	547	551			55257			0.107%
4 3	7.563	551	553	558			48136	2201917	1.10%	0.149%
44	7.653	558	562	564			37672	1124293	0.56%	0.076%
124	7.702	564	567	569				838372	0.42%	0.057%
	7.702	204	507	309	V V		36488	603514	0.30%	0.041%
44 45 46	7.781	569	575	576	VV		73101	2397468	1.20%	0.162%
47	7.811	576	578	579			66156	879879	0.44%	0.162%
48	7.841	579	581	584	VV	2	89573	2312918	1.16%	0.059%
49	7.890	584	586	590	VV	3	94468	3034069	1.52%	
50	7.970	590	594	597		2	144369	4961175	2.48%	0.205% 0.335%
			551	33,	• •		144303	4701173	2.400	0.3356
51	8.029	597	600	604	VV	4	155036	4811271	2.41%	0.325%
52	8.079	604	605	606	VV		157229	2481886	1.24%	0.168%
53	8.108	606	608	611		2	171589	4058093	2.03%	0.274%
54	8.158	611	613	614		_	156148	2440274	1.22%	0.165%
55	8.188	614	616	620	VV	3	126022	3487923	1.74%	-
	0.100	011	010	020	v v		120022	340/923	1./45	0.235%
56	8.247	620	622	626	VV	2	116275	3095640	1.55%	0.209%
5,7	8.326	626	630	636	VV	3	114839	4771677	2.39%	0.322%
58	8.406	636	638	639	VV	2	84322	1365680	0.68%	0.092%
59	8.435	639	641	644	VV		78254	1649222	0.82%	0.111%
58 59 6	8.495	644	647	648	VV	2	79840	1475434	0.74%	0.100%
	0 504	640	650	c= .		_				
61 62	8.524 8.584	648	650	654			73285	2142417	1.07%	0.145%
		б54 657	656	657		2	58311	863519	0.43%	0.058%
63	8.614	657	659	661	VV		70452	1255286	0.63%	0.085%
64	8.643	661	662	665	VV		69904	1518372	0.76%	0.103%
65 66 67 68	8.683	665	666	668	VV		62207	954047	0.48%	0.064%
66	8.723	668	670	674	W		57058	1239243	0.62%	0.084%
67	8.802	674	678	689		3	58426	3938241	1.97%	0.266%
68	8.960	689	694	697			56619	2497786	1.25%	0.169%
69	9.040	697	702	706			56146	2435113	1.22%	0.164%
70	9.099	706	708	710	VV	-	50943	753723	0.38%	0.104%
. •	2.022	, 0 0	, 00	, 10	v v		20243	133123	0.30%	0.0314
71	9.169	713	715	720	VV	2	52491	1531483	0.77%	0.103%
72	9.238	720	722	727	VV	2	52060	1705839	0.85%	0.115%
73	9.307	727	729	731	VV		51531	794818	0.40%	0.054%

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406_13.D

Acg On : 16 Mar 2006 8:22 am

Operator : AF

Sample : 06-061-4 20X Misc : 25ML C135

ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: lscint.e

Integrator: ChemStation

\$moothing : OFF Filtering: 5

Sampling: 1

Min Area: 5 % of largest Peak
Start Thrs: 0.2

Max Peaks: 100

Start Thrs: 0.2 Max Peaks: 100
Stop Thrs: 0 Peak Location: TOP

.If leading or trailing edge < 100 prefer < Baseline drop else tangent > []Peak separation: 5

Method Title	:	C:\MSDCHEM\1\METHODS\TO15021805.M
Title		

9.337	731	732	735	VV		40582	1011421	0 51%	N 0688	
9.386	735	737								
						101/0	302117	0.40%	0.065%	
9.436	740	742	745	VV		36024	902826	0 45%	0 0619	
9.604	757	759								
9.654										
		. , •		• •		31012	700754	0.33%	0.0536	
9.822	777	781	783	W		27964	584689	0 208	0 020%	
10.000	001	000	011	vv		10200	450308	0.238	0.030%	
10.130	811	812	816	DV		14551	265600	0 120	0 0109	
-										
10.500	040	030	000	VV		20526	9/2/31	0.49%	0.066%	
11.319	925	932	936	PV		13794	657944	በ ጓጓዬ	0 0448	
12.191	1012				2					
					-					
					2					
					4					
12.333	1030	1010	1012	0 0		04712	19/9092	0.996	0.1348	
12.428	1042	1044	1046	VV		79205	1535423	0.77%	0 104%	
12.478	1046	1049	1062	VV	4					
12.646	1062	1066	1068	VV	2					
12.775	1068	1079								
					-					
							1002503	2.320	0.5150	
12.904	1090	1092	1096	VV		105353	3364191	1.68%	0.227%	
12.963	1096	1098	1101	VV	4	116341	3201728	1.60%	0.216%	
13.033	1101	1105	1111	VV	3	117523	6717032			
13.112	1111	1113	1125	VV	3	103236				
13.251	1125	1127	1132	VV		79029	2581831	1.29%	0.174%	
	1290	1296	1298	ΡV	2	17306	523989	0.26%	0.035%	
15.034	1298	1307	1313	VV	3	35837	2440935	1.22%	0.165%	
15.153	1313	1319	1320	VV	4	50095	1951227	0.98%	0.132%	
15.282	1320	1332	1337	VV	5	61498	5447015	2.72%	0.368%	
15.342	1337	1338	1342	VV	2	55324	1718751	0.86%	0.116%	
15 417	1240				_					
15.411	1342	1345	1353	VV	2	54219	3329876	1.67%	0.225%	
	9.386 9.436 9.604 9.654 9.684 9.743 9.822 9.852 9.931 9.991 10.090 10.130 10.229 10.377 10.437 10.506 11.319 12.300 12.329 12.389 12.428 12.478 12.646 12.775 12.864 12.963 13.033 13.112 13.251 14.925 15.034 15.153 15.282	9.386 735 9.436 740 9.604 757 9.654 761 9.684 765 9.743 771 9.822 777 9.852 783 9.931 790 9.991 794 10.090 804 10.130 811 10.229 816 10.377 833 10.437 841 10.506 848 11.319 925 12.191 1012 12.300 1021 12.329 1032 12.329 1032 12.389 1038 12.428 1042 12.478 1046 12.646 1062 12.775 1068 12.864 1083 12.904 1090 12.963 1096 13.033 1101 13.12 1111 13.251 1125 14.925 1290 15.034 1298 15.153 1313 15.282 1320 15.342 1337	9.386 735 737 9.436 740 742 9.604 757 759 9.654 761 764 9.684 765 767 9.743 771 773 9.822 777 781 9.852 783 784 9.931 790 792 9.991 794 798 10.090 804 808 10.130 811 812 10.229 816 822 10.377 833 837 10.437 841 843 10.506 848 850 11.319 925 932 12.191 1012 1020 12.300 1021 1031 12.329 1032 1034 12.329 1032 1034 12.329 1032 1034 12.389 1032 1034 12.428 1042 1044 12.428 1042 1044 12.428 1046	9.386 735 737 740 9.436 740 742 745 9.604 757 759 761 9.654 761 764 765 9.684 765 767 771 9.743 771 773 777 9.822 777 781 783 9.852 783 784 790 9.931 790 792 794 9.991 794 798 804 10.090 804 808 811 10.130 811 812 816 10.229 816 822 823 10.377 833 837 841 10.437 841 843 848 10.506 848 850 860 11.319 925 932 936 12.191 1012 1020 1021 12.300 1021 1031 1032 12.329 1032 1034 1038 12.329 1032 1034 1038 12.329 1032 1034 1038 12.329 1032 1034 1038 12.329 1032 1034 1038 12.329 1032 1034 1038 12.329 1038 1040 1042 12.428 1042 1044 1046 12.478 1046 1049 1062 12.646 1062 1066 1068 12.775 1068 1079 1083 12.864 1083 1088 1090 12.904 1090 1092 1096 12.904 1090 1092 1096 12.963 1096 1098 1101 13.033 1101 1105 1111 13.112 1111 1113 1125 13.251 1125 1127 1132 14.925 1290 1296 1298 15.034 1298 1307 1313 15.153 1313 1319 1320 15.282 1320 1332 1337 15.342 1337 1338 1342	9.386 735 737 740 VV 9.436 740 742 745 VV 9.604 757 759 761 VV 9.654 761 764 765 PV 9.684 765 767 771 VV 9.743 771 773 777 VV 9.852 783 784 790 VV 9.991 794 798 804 VV 10.090 804 808 811 VV 10.130 811 812 816 PV 10.229 816 822 823 VV 10.377 833 837 841 VV 10.437 841 843 848 VV 10.506 848 850 860 VV 11.319 925 932 936 PV 12.191 1012 1020 1021 VV 12.300 1021 1031 1032 VV 12.329 1032 1034 1038 VV 12.329 1032 1034 1038 VV 12.329 1032 1034 1038 VV 12.339 1038 1040 1042 VV 12.428 1042 1044 1046 VV 12.478 1046 1049 1062 VV 12.466 1062 1066 1068 VV 12.775 1068 1079 1083 VV 12.964 1083 1088 1090 VV 12.904 1090 1092 1096 VV 12.963 1096 1098 1101 VV 13.033 1101 1105 1111 VV 13.112 1111 1113 1125 VV 13.251 1125 1127 1132 VV 14.925 1290 1296 1298 PV 15.034 1298 1307 1313 VV 15.153 1313 1319 1320 VV 15.282 1320 1332 1337 VV 15.342 1337 1338 1342 VV	9.386	9.386 735 737 740 VV 43175 9.436 740 742 745 VV 36024 9.604 757 759 761 VV 16540 9.684 765 767 771 VV 42487 9.743 771 773 777 VV 31812 9.822 777 781 783 VV 27964 9.852 783 784 790 VV 22047 9.931 790 792 794 VV 22858 9.991 794 798 804 VV 17555 10.090 804 808 811 VV 18286 10.130 811 812 816 PV 14551 10.229 816 822 823 VV 18466 10.377 833 837 841 VV 24009 10.437 841 843 848 VV 23619 10.506 848 850 860 VV 20528 11.319 925 932 936 PV 13794 12.191 1012 1020 1021 VV 2 26179 12.300 1021 1031 1032 VV 70286 12.329 1032 1034 1038 VV 2 77735 12.389 1038 1040 1042 VV 84912 12.428 1042 1044 1046 VV 79205 12.478 1046 1049 1062 VV 4 81505 12.646 1062 1066 1068 VV 2 82261 12.775 1068 1079 1083 VV 6 95611 12.864 1083 1088 1090 VV 105353 12.904 1090 1092 1096 VV 105353 12.905 1096 1098 1101 VV 4 116341 13.033 1101 1105 1111 VV 3 117523 13.112 1111 1113 1125 VV 70229 14.925 1290 1296 1298 PV 2 17306 15.034 1298 1307 1313 VV 3 35837 15.153 1313 1319 1320 VV 4 50095 15.582 1320 1332 1337 VV 5 61498 15.342 1337 1338 1342 VV 5 55324	9.386 735 737 740 VV 43175 962447 9.436 740 742 745 VV 36024 902826 9.604 757 759 761 VV 16540 158516 9.654 761 764 765 PV 22800 258720 9.684 765 767 771 VV 42487 954360 9.743 771 773 777 VV 31812 788954 9.822 777 781 783 VV 27964 584689 9.852 783 784 790 VV 22047 667007 9.931 790 792 794 VV 22858 288259 9.991 794 798 804 VV 17555 712866 10.090 804 808 811 VV 18286 450308 10.130 811 812 816 PV 14551 265699 10.229 816 822 823 VV 18466 641538 10.377 833 837 841 VV 24009 856287 10.437 841 843 848 VV 23619 545657 10.506 848 850 860 VV 20528 972731 11.319 925 932 936 PV 13794 657944 12.191 1012 1020 1021 VV 2 26179 867823 12.300 1021 1031 1032 VV 70286 2961762 12.329 1032 1034 1038 VV 2 77735 2738139 12.389 1038 1040 1042 VV 84912 1979692 12.428 1042 1044 1046 VV 79205 1535423 12.375 1068 1079 1083 VV 6 95611 7674935 12.775 1068 1079 1083 VV 6 95611 7674935 12.864 1083 1088 1090 VV 105353 3364191 12.904 1090 1092 1096 VV 105353 3364191 12.904 1090 1092 1096 VV 105353 3364191 12.904 1090 1092 1096 VV 105353 3364191 12.905 1098 1101 VV 4 116341 3201728 13.033 1101 1105 1111 VV 3 117523 6717032 13.112 1111 1113 1125 VV 3 103236 7367249 13.251 125 1127 1132 VV 79029 2581831 14.925 1290 1296 1298 PV 2 17306 523989 15.034 1298 1307 1313 VV 3 35837 2440935 15.153 1313 1319 1320 VV 4 50095 1951227 15.282 1320 1332 1337 VV 5 61498 5447015 15.342 1337 1338 1342 VV 2 55324 1718751	9.386 735 737 740 VV 43175 962447 0.48% 9.436 740 742 745 VV 36024 902826 0.45% 9.604 757 759 761 VV 16540 158516 0.08% 9.654 761 764 765 PV 22800 258720 0.13% 9.684 765 767 771 VV 42487 954360 0.48% 9.743 771 773 777 VV 31812 788954 0.39% 9.852 777 781 783 VV 27964 584689 0.29% 9.852 783 784 790 VV 22047 667007 0.33% 9.931 790 792 794 VV 22858 288259 0.14% 9.991 794 798 804 VV 17555 712866 0.36% 10.090 804 808 811 VV 18286 450308 0.23% 10.130 811 812 816 PV 14551 265699 0.13% 10.229 816 822 823 VV 18466 641538 0.32% 10.377 833 837 841 VV 24009 856287 0.43% 10.437 841 843 848 VV 23619 545657 0.27% 10.506 848 850 860 VV 20528 972731 0.49% 11.319 925 932 936 PV 13794 657944 0.33% 12.319 1012 1020 1021 VV 2 26179 867823 0.43% 12.329 1032 1034 1038 VV 270286 2961762 1.48% 12.329 1032 1034 1038 VV 270286 2961762 1.48% 12.329 1032 1034 1038 VV 27735 2738139 1.37% 12.389 1038 1040 1042 VV 84912 1979692 0.99% 12.428 1042 1044 1046 VV 79205 1535423 0.77% 12.478 1046 1049 1062 VV 4 81505 7342997 3.67% 12.646 1062 1066 1068 VV 2 82261 2455941 1.23% 12.904 1090 1092 1096 VV 105353 3364191 1.68% 12.904 1090 1092 1096 VV 105353 3364191 1.68% 13.251 1125 1127 1132 VV 79029 2581831 1.29% 14.925 1290 1296 1298 PV 2 17306 523989 0.26% 15.034 1298 1307 1313 VV 3 35837 2440935 1.22% 15.153 1313 1319 1320 VV 4 50095 1951227 0.98% 15.282 1320 1332 1337 VV 5 61498 5447015 2.72% 15.342 1337 1338 1342 VV 2 55324 1718751 0.86%	9.386 735 737 740 VV 43175 962447 0.48% 0.065% 0.065% 0.436 740 742 745 VV 36024 902826 0.45% 0.061% 0.661% 0.664 757 759 761 VV 16540 158516 0.08% 0.011% 0.654 761 764 765 PV 22800 258720 0.13% 0.017% 0.664% 0.771 773 777 VV 31812 788954 0.39% 0.053% 0.053% 0.771 773 777 VV 31812 788954 0.39% 0.053% 0.053% 0.852 783 784 790 VV 22047 667007 0.33% 0.045% 0.991 790 792 794 VV 22858 228259 0.14% 0.019% 0.991 790 792 794 VV 22858 228259 0.14% 0.019% 0.991 794 798 804 VV 17555 712866 0.36% 0.048% 10.090 804 808 811 VV 18286 450308 0.23% 0.030% 10.130 811 812 816 PV 14551 265699 0.13% 0.018% 10.377 833 837 841 VV 24009 856287 0.43% 0.055% 10.377 833 837 841 VV 24009 856287 0.43% 0.055% 10.377 843 837 841 VV 24009 856287 0.43% 0.055% 10.377 843 843 848 VV 23619 545657 0.27% 0.037% 10.506 848 850 860 VV 20528 972731 0.49% 0.066% 11.319 925 932 936 PV 13794 657944 0.33% 0.044% 12.191 1012 1020 1021 VV 2 26179 867823 0.43% 0.059% 12.320 1021 1031 1032 VV 70286 2961762 1.48% 0.200% 12.329 1032 1034 1038 VV 277735 2738139 1.37% 0.165% 12.329 1032 1034 1038 VV 277735 2738139 1.37% 0.165% 12.389 1038 1040 1042 VV 84912 1979692 0.99% 0.134% 0.506% 12.329 1032 1034 1038 VV 277735 2738139 1.37% 0.165% 12.389 1038 1040 1042 VV 84912 1979692 0.99% 0.134% 0.516% 12.478 1046 1049 1062 VV 4 81505 7342997 3.67% 0.496% 12.329 1032 1034 1038 VV 6 95611 7674935 3.84% 0.516% 12.646 1062 1066 1068 VV 2 82261 2455941 1.23% 0.166% 12.775 1068 1079 1083 VV 6 95611 7674935 3.84% 0.516% 12.964 1083 1088 1090 VV 11551 463241 3201728 1.60% 0.216% 13.333 1101 1105 1111 VV 3 117523 6717032 3.36% 0.497% 13.251 1125 1127 1132 VV 79029 2581831 1.29% 0.174% 14.925 1290 1296 1298 PV 2 17306 52389 0.26% 0.035% 15.153 1313 1319 1320 VV 4 50095 1951227 0.96% 0.132% 15.532 1320 1332 1337 VV 5 61498 5447015 2.72% 0.366% 0.116% 15.5324 1337 1338 1332 1332 VV 5 61498 5447015 2.72% 0.366% 0.116% 15.5324 1337 1338 1332 1332 VV 5 61498 5447015 2.72% 0.366% 0.116% 15.5324 1337 1338 1332 1332 VV 5 61498 5447015 2.72% 0.366% 0.116% 15.5324 1337 1338 1332 1337 VV 5

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406_13.D

Acq On : 16 Mar 2006 8:22 am

Operator : AF

Sample : 06-061-4 20X Misc : 25ML C135

ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: lscint.e

Integrator: ChemStation

Smoothing : OFF Filtering: 5

Sampling : 1 Min Area: 5 % of largest Peak

Start Thrs: 0.2 Max Peaks: 100 Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >

Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M

T015021805.M Mon Mar 20 16:20:25 2006 RPT1

Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\

Data File : 031406 13.D

Acq On : 16 Mar 2006 8:22 am

Operator : AF

Sample : 06-061-4 20X Misc : 25ML C135

ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: lscint.e

Integrator: ChemStation

Smoothing: OFF Filtering: 5

Sampling : 1 Min Area: 5 % of largest Peak

Start Thrs: 0.2 Max Peaks: 100 Stop Thrs: 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >

Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\T015021805.M

Title :

151 152	23.348			2151		5	38548	1716562	0.86%	0.116%	
11112	23.476			2165			594904	19451608	9.73%	1.313%	
153	23.665			2192			3921642	156848873	78.44%	10.589%	
154	23.843			2202			83152	2966510	1.48%	0.200%	
155	24.041	2206	2216	2220	VV	2	281051	10012974	5.01%	0.676%	
156	24.101	2220	2222	2226	VV		117941	2613704	1.31%	0.176%	
1157	24.180	2226	2230	2237	VV	4	35527	1560822	0.78%	0.105%	
157 158 159	24.319	2237	2244	2254	VV	2	269159	9626304	4.81%	0.650%	
159	24.507	2254	2263	2267	VV		327875	10955159	5.48%	0.740%	
160	24.566	2267	2269	2276	VV	2	153771	4651292	2.33%	0.314%	
161	24.705	2276	2283	2289	VV		76345	2376091	1.19%	0.160%	
162	24.814	2289	2294	2296		2	38286	1159011	0.58%	0.078%	
163	24.864			2303			36415	1068595	0.53%	0.072%	
164	24.943			2309			33827	968891	0.48%	0.065%	
165	24.992			2315			44990	1245544	0.62%	0.084%	
						_		1010011	0.020	0.0040	
166	25.076	2315	2319	2325	VV	3	41765	1282043	0.64%	0.087%	
167	25.221			2340			834092	19770494	9.89%	1.335%	
168	25.357			2352		3	137917	4203805	2.10%	0.284%	
169	25.444			2365		_	174155	4548677	2.27%	0.307%	
170	25.657			2384		3	22581	574664	0.29%	0.039%	
i ! •					• •	•	22301	371001	0.250	0.0558	
171	25.793	2387	2393	2396	VV	3	28494	731801	0.37%	0.049%	
172	25.861	2396	2400	2406	VV	6	42794	1229682	0.61%	0.083%	
172 173	25.987	2406	2413	2419	ΡV	2	103612	2431360	1.22%	0.164%	
1774	26.171	2426	2432	2435	VV	4	202918	5568599	2.78%	0.376%	
175	26.268	2435	2442	2446	VV	2	700502	20438997	10.22%	1.380%	
176	26.346	2446	2450	2460	VV	6	421214	17211489	8.61%	1.162%	
177	26.491	2460	2465	2471	VV		381312	9198933	4.60%	0.621%	
17/8	26.588	2471	2475	2479	VV	4	89248	2671126	1.34%	0.180%	
. 79	26.656	2479	2482	2487	VV	3	57809	1344505	0.67%	0.091%	
178 79 180	26.743		2491				51559	1242377	0.62%	0.084%	
181	26.850			2507		_	2668519	60819040	30.41%	4.106%	
182	26.937			2519		3	389786	14330265	7.17%	0.967%	
183	27.083			2533			2296233	74267549	37.14%	5.014%	
184	27.160			2541		_	531480	11144816	5.57%	0.752%	
185	27.267	2541	2545	2547	VV	3	26645	586835	0.29%	0.040%	
186	27.364	2547	2555	2560	VV	2	493454	11528940	5.77%	0.778%	
187	27.471			2572			40860	1869150	0.93%	0.126%	
188	27.606			2586			336671	11090427	5.55%	0.749%	
		_			. •	_		/ U 1 L /	J.JJ0	0./420	

Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\

Data File : 031406 13.D

Acg On : 16 Mar 2006 8:22 am

Operator : AF

Sample : 06-061-4 20X Misc : 25ML C135

ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: lscint.e

Integrator: ChemStation

Smoothing : OFF Filtering: 5

Sampling : 1 Min Area: 5 % of largest Peak

Start Thrs: 0.2 Max Peaks: 100 Stop Thrs: 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent > Peak separation: 5

reak separation: 5

Method : C:\MSDCHEM\1\METHODS\T015021805.M

Title :

189 27.732 2586 2593 2597 VV 2 1076667 26427497 13.22% 1.784% 27.800 2597 2600 2605 VV 4 309929 10737283 190 5.37% 0.725% 27.887 2605 2609 2613 VV 591814 12801515 6.40% 0.864% 192 2613 2616 2620 VV 2 297922 27.955 6931132 3.47% 0.468% 193 28.062 2620 2627 2639 VV 1341784 30961952 15.48% 2.090% 194 28.227 2639 2644 2651 PV 2 1.13% 9.56% 91632 2249992 0.152% 195 28.392 2651 2661 2666 PV 3 571382 19118253 1.291% 28.459 2666 2668 2671 VV 2 117709 2183752 1.09% 0.147% 28.537 2671 2676 2684 VV 2 447710 11628662 5.82% 0.785% 28.644 2684 2687 2689 VV 4 62821 1198388 0.60% 0.081% 28.721 199 2689 2695 2700 VV 3 450552 14456191 7.23% 0.976% 200 28.789 2700 2702 2703 VV 87902 1412486 0.71% 0.095% 201 28.838 2703 2707 2709 VV 2 249183 5476304 2.74% 0.370% 202 28.925 2709 2716 2723 VV 4 870119 31855187 15.93% 2.151% 203 29.070 2723 2731 2735 VV 8260906 199971170 100.00% 13.500% 29.119 2735 2736 2742 VV 2 522766 11883768 5.94% 204 0.802% 205 29.235 2742 2748 2756 VV 4 454816 14565076 7.28% 0.983% 206 29.419 2756 2767 2772 VV 4 1283662 55751725 27.88% 3.764% 207 29.497 2772 2775 2778 VV 3 516635 10079132 5.04% 0.680% 208 29.545 2778 2780 2783 VV 6.71% 3.46% 737538 13426730 0.906% 209 29.594 2783 2785 2788 VV 2 333522 6924393 0.167% 210 29.652 2788 2791 2794 VV 2 517373 11005462 5.50% 0.743% 29.700 2794 2796 2804 VV 4 427832 9161379 4.58% 0.618% 29.807 2804 2807 2811 PV 244711 4821867 2.41% 0.326% 29.865 2811 2813 2814 VV 63319 945792 0.47% 0.064% 214 29.923 2814 2819 2822 VV 5 228053 5695371 2.85% 0.384% 215 30.011 2822 2828 2832 VV 878669 20371141 10.19% 1.375% 2832 2839 2849 VV 4 993391 34554692 17.28% 30.117 2.333% 30.272 2849 2855 2859 VV 944512 19498217 9.75% 1.316% 30.331 2859 2861 2867 VV 4 100972 1785470 0.89% 0.121% 30.437 2867 2872 2873 PBA3 92706 1709886 0.86% 0.115%

Sum of corrected areas: 1481275810

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406_13.D

Agq On : 16 Mar 2006 8:22 am

Operator : AF

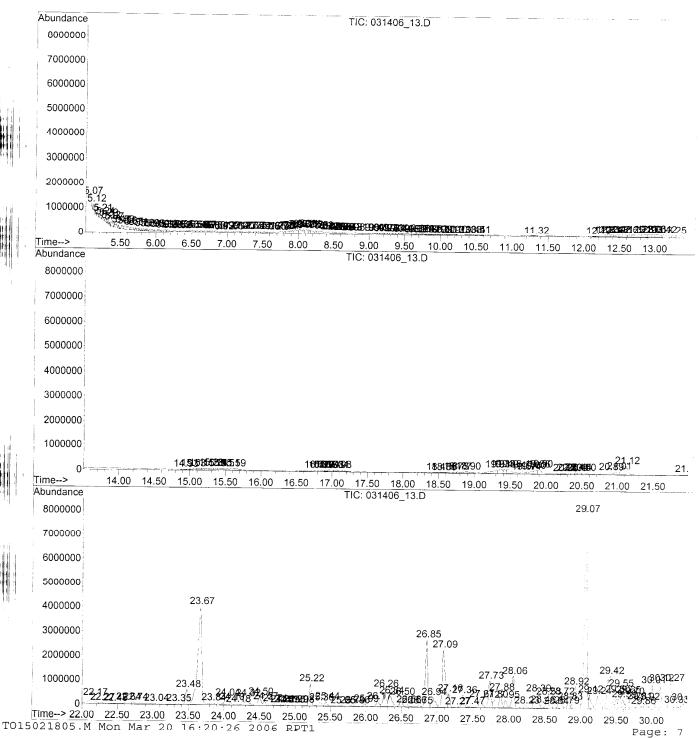
Sample : 06-061-4 20X Misc : 25ML C135

ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

Quant Title :

TIC Library : C:\DATABASE\NIST02.1.
TIC Integration Parameters: lscint.e



3550A QA/QC REPORT

Sample Information

Run Information

Sample Name: 061-4 C135 031506 13

Inject Time : 05:53:21

Inlet Position: 7

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std. : Yes

Sample Type : Sample

Cryofocus: Yes

Analysis Type : Low Level

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Sample Dryer not ready!

Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406_14.D

: 16 Mar 2006 12:21 pm Acq On

Operator : AF

Sample : 06-061-5 20X Misc : 25ML C141

ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

Quant Title :

TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e

TTC Top Hit name	RT	EstConc	Unit	s Response	~	-Interr RT	nal Stand Resp	ard Conc	+ 1000	sted. Tal	zd.
Heptane	20.11	10.0	Vdaa	2665730	2	18 26	2665730	10 0-1	VDI (61		
clohexane, methyl-	21.47			10339800	2		2665730	10.0-		1. 1	
Cyclohexane, methyl-	21.48	14.3	Vdqq	3815490	2		2665730	10.0	1 peak	colit	
Cyclohexane, methyl-	21.49			14016700	2		2665730	10.0	, pero	4.	
Heptane, 3-methyl-	24.03			10134100	3		11278400			•	
Tyclohexane, 1,3	24.20			19755900	3		11278400				
yclohexane, 1,1,	26.37				3		11278400				
⊮Octane, 4-methyl-					3		11278400				
Octane, 3-methyl-	27.31	19.9	ppbV	22505900	3		11278400				
Cyclopentane, 1-m		8.8	Vdqq	9911310	3	26.10	11278400				
4-Octen-3-one		18.3	ppbV	20580500	3		11278400				
Cyclohexane, 1-et	27.90				3		11278400	10.0			
Nonane	28.02				3		11278400	10.0			
1-Ethyl-3-methylc	28.35	14.9	ppbV	16825800	3		11278400	10.0			
1-Cyclobutanone,2	28.69				3		11278400	10.0 -			
Octane, 2,6-dimet	28.90				3		11278400	10.0			
Octane, 2,6-dimet	28.91				3		11278400	10.0 —	-		
Heptane, 4-propyl-		12.4	Vdqq	13932800	3		11278400	10.0			
Benzene, propyl-					3		11278400	10.0			
12:12:7,7-Tetrameth	29.60				3		11278400	10.0			
11R,2c,3t,4t-Tetra	29.64			16379100			11278400	10.0			
Nonane, 3-methyl-	29.70			12965400			11278400	10.0			
Benzene, 1,2,3-tr	30.12						11278400	10.0			

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\ Data File : 031406 14.D Acq On : 16 Mar 2006 12:21 pm Operator : AF Sample : 06-061-5 20X Misc : 25ML C141 ALS Vial : 8 Sample Multiplier: 1 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M Quant Title : TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e Peak Number 1 Heptane Concentration Rank 19 Area Relative to ISTD R.T. EstConc 20.11 10.00 ppbV 2665730 1,4-difluorobenzene 18.26 Hit# of 5 Tentative ID MW MolForm CAS# Qual ------1 Heptane 100 C7H16 000142-82-5 86 2 Heptane 100 C7H16 000142-82-5 86 3 Heptane 100 C7H16 000142-82-5 64 4 Heptane 100 C7H16 000142-82-5 56 5 Hexane, 3-methyl-100 C7H16 000589-34-4 Abundance Scan 1819 (20.108 min): 031406_14.D (-1811) (-) m/z 43.10 108.00% 57 5000 19.80 20.00 20.20 20.40 41.10 71.67% 33 50 64 0 10 20 30 40 50 60 70 80 90 100 #3893: Heptane Abundance 43 19.80 20.00 20.20 20.40 5000 m/z 71.10 67.82% ap3/20/06 100 m/z--> 0 10 20 30 40 50 60 70 80 90 100 Abundance #3891: Heptane 19.80 20.00 20.20 20.40 m/z 57.10 54.55% 5000 71 50 64 78 85 19.80 20.00 20.20 20.40 15 m/z 56.10 37.76% m/z--> 0 10 20 30 40 £0 60 70 80 90 100 Abundance #38**9**2: Heptane 5000 19.80 20.00 20.20 20.40 29 _____15 TOm 5021805. NO Mon Mar 230 140265032 6000 FO REDI 90 100 Page: 5

Data Path : C:\MSDChem\1\DATA\2006_FER\031506\

Data File : 031406 14.D

Acq On : 16 Mar 2006 12:21 pm

Operator : AF

Sample : 06-061-5 20X Misc : 25ML C141

ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: lscint.e

Integrator: ChemStation

Smoothing: OFF Filtering: 5

Sampling : 1 Min Area: 5 % of largest Peak

Start Thrs: 0.2 Max Peaks: 100 Stop Thrs: 0 Peak Location: TOP

If leading or trailing cdgc < 100 prefer < Baseline drop else tangent >

Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\T015021805.M

Title :

Signal : TIC

peak #	K R.T. min		max scan	last scan	P T		peak height	corr. area	corr. % max.	% of total
1 2 3 4	20.118 20.346 21.287 21.475 22.129	1811 1823 1915 1939 2001	1820 1843 1938 1957 2023	1823 1869 1939 1980 2025	VV PV	3 2 3	64994 159739 74626 210189 61552	2665730 21262346 2584290 28172326 4462590	4.60% 36.71% 4.46% 48.65% 7.71%	0.265% 2.110% 0.256% 2.796% 0.443%
6 7 8 9	22.169 22.555 22.932 23.031 23.249	2025 2047 2082 2107 2120	2027 2066 2104 2114 2136	2047 2082 2107 2120 2152	VV	5	63451 39796 53207 198231 772895	4793957 3928090 4154926 8199244 57913832	8.28% 6.78% 7.17% 14.16% 100.00%	0.476% 0.390% 0.412% 0.814% 5.748%
12 13	23.477 23.725 24.042 24.210 24.468	2152 2169 2205 2223 2249	2159 2184 2216 2233 2259	2198 2223 2249	VV VV	4 3 3	87530 276139 285296 362260 142571	6292185 22864416 18367026 27866858 9849306	10.86% 39.48% 31.71% 48.12% 17.01%	0.624% 2.269% 1.823% 2.766% 0.978%
17 18 19	24.616 24.735 24.993 25.144 25.231	2271 2278 2298 2320 2329	2274 2286 2312 2326 2335	2298		7	48823 79092 323992 95558 177630	1777276 6216115 20896180 3875311 7881441	3.07% 10.73% 36.08% 6.69% 13.61%	0.176% 0.617% 2.074% 0.385% 0.782%
22 23 24	25.464 25.638 25.735 25.842 26.055	2351 2367 2382 2392 2405	2359 2377 2387 2398 2420	2367 2382 2392 2405 2422	PV VV	3	35415 69397 53541 115470 340602	1319681 2866453 2606943 4711934 13811583	2.28% 4.95% 4.50% 8.14% 23.85%	0.131% 0.284% 0.259% 0.468% 1.371%
27 28 29	26.113 26.191 26.268 26.365 26.453	2422 2428 2439 2446 2458	2434 2442 2452	2428 2439 2446 2458 2467	VV VV		386586 596165 270003 475402 129474	11278384 28517100 8202320 18141901 4901261	19.47% 49.24% 14.16% 31.33% 8.46%	1.1198 2.8308 0.8148 1.8018 0.4868
32 33 34	26.744 26.831 26.899 26.996 27.093	2476 2495 2504 2511 2523	2507 2517	2504 2511 2523	VV VV VV VV	2	622559 364866 304633 625360 539326	22945765 11827579 9933704 26659894 17529626	39.62% 20.42% 17.15% 46.03% 30.27%	2.277% 1.174% 0.986% 2.646% 1.740%

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406_14.D

Acq On : 16 Mar 2006 12:21 pm Operator : AF

Sample : 06-061-5 20X Misc : 25ML C141

ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: lscint.e

Integrator: ChemStation

Smoothing : OFF Filtering: 5

Sampling : 1 Min Area: 5 % of largest Peak Start Thrs: 0.2

Max Peaks: 100 Stop Thrs : 0 Peak Location: TOP

 $^{"}$ If leading or trailing edge < 100 profer < Baseline drop else tangent > Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\T015021805.M

36										
37	27.306		2549				674295	22505874	38.86%	2.234%
	27.393	2555	2558	2560	VV	2	41767	1098323	1.90%	0.109%
38	27.442		2563				43415	1120672	1.94%	0.111%
39	27.529	2565	2572	2578	VV	3	340779	12236155	21.13%	1.214%
40	27.665	2578	2586	2589	VV	2	266530	10198071	17.61%	1.012%
	05 5.0									
41	27.742	2589		2598			456505	16993780	29.34%	1.687%
42	27.829		2603				687733	20580459	35.54%	2.043%
43	27.897	2607					381769	10199941	17.61%	1.012%
44	28.023	2615	_	2627		2	445223	14261060	24.62%	1.415%
45	28.081	2627	2629	2635	VV		99019	2274440	3.93%	0.226%
46	28.188	2635	2640	2645	W	3	123777	3358920	5.80%	0.333%
47	28.304		2652		PV	_	230029	4774962	8.24%	
48	28.353		2657			2	717333	22310158		0.474%
49	28.411			2667			222161		38.52%	2.214%
i 🗏 o	28.508	2667					676749	5126839	8.85%	0.509%
48 49 50		2007	2075	2000	vv	-1	0/0/49	22564768	38.96%	2.240%
51	28.615	2680	2684	2687	VV	3	138758	3601197	6.22%	0.357%
52	28.683		2691		VV		1039157	28981150	50.04%	2.876%
53	28.789		2702		VV	3	279145	9163488	15.82%	0.909%
54	28.906			2719		2	1635416	51831590	89.50%	5.144%
55	28.993	2719	2723		VV		370271	10865437	18.76%	1.078%
55 56 57 58						-		10005457	10.70%	1.070%
56	29.041			2732			397207	10995475	18.99%	1.091%
牌7	29.119	2732	2736	2741	VV	3	748883	20803643	35.92%	2.065%
	29.226		2747	2755	VV	6	539520	23523811	40.62%	2.335%
59	29.390		2764		VV	3	1212767	37994427	65.61%	3.771%
60	29.497	2769	2775	2778	VV	3	801131	23873305	41.22%	2.369%
<i>C</i> 1	20 545	0.550	0.500							
61 62	29.545	2778	2780		VV	3	520407	10797320	18.64%	1.072%
	29.594	2783					672343	14524836	25.08%	1.442%
63	29.642		2790			2	773962	19193374	33.14%	1.905%
64	29.701	2794			VV		489356	12965383	22.39%	1.287%
65	29.807	2803	2807	2810	PV	2	240402	5135473	8.87%	0.510%
66	29.914	2810	2818	2822	VV	5	506158	19708388	34.03%	1.956%
67	30.001	2822		2831			475404	15725829	27.15%	1.561%
68	30.117	2831		2843	VV		1402682	39072108	67.47%	
69	30.195	2843	2847	2849			326163	8973005	15.49%	3.878% 0.891%
70	30.234	2849		2853			275746			
111		-019	-001	2000	vv	_	4/3/40	4877617	8.42%	0.484%
71 72	30.273	2853	2855	2858	VV	2	484453	9162435	15.82%	0.909%
72	30.331	2858	2861	2864	VV	3	183452	3256551	5.62%	0.323%
73	30.370	2864	2865	2867	PV		27389	254543	0.44%	0.025%

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

pata File : 031406_14.D

Acq On : 16 Mar 2006 12:21 pm

Operator : AF

Sample : 06-061-5 20X

Misc : 25ML C141 ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: lscint.e

Integrator: ChemStation

\$moothing : OFF Filtering: 5

Sampling : 1 Min Area: 5 % of largest Peak

Start Thrs: 0.2 Max Peaks: 100 Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent > Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\T015021805.M

Title

74 30.428 2867 2871 2873 PBA3 202046 3402890 5.88%

Sum of corrected areas: 1007565271

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406 14.D

Acq On : 16 Mar 2006 12:21 pm

Operator : AF

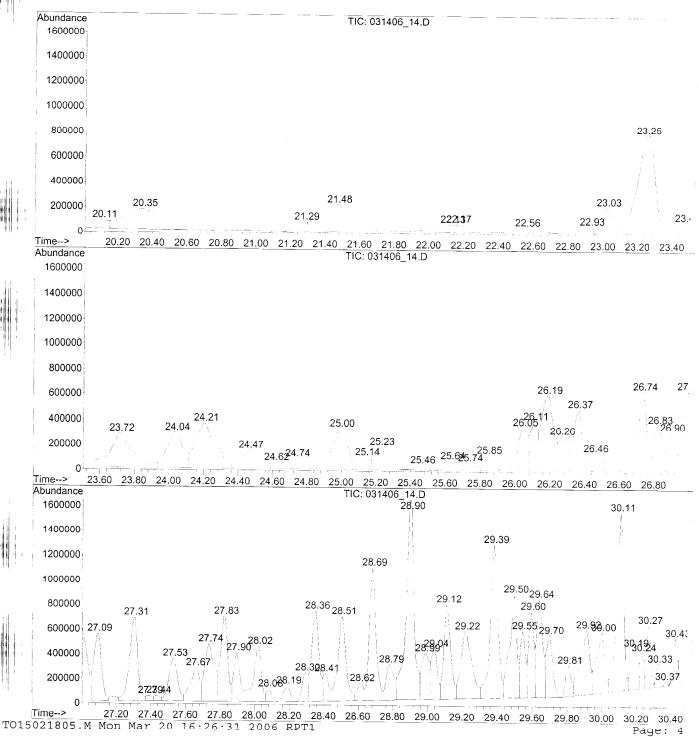
Sample : 06-061-5 20X Misc : 25ML C141

ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

Quant Title :

TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e



3550A QA/QC REPORT

Sample Information

Run Information

Sample Name: 061-5 C141 031506_14

Inject Time : 09:52:21

Inlet Position: 8

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std. : Yes

Sample Type : Sample

Cryofocus : Yes

Analysis Type : Low Level

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Sample Dryer not ready!

Data Path : C:\MSDChem\1\DATA\2006 FFR\031506\

Data File : 031406 14.D

Acq On : 16 Mar 2006 12:21 pm

Operator : AF

Sample : 06-061-5 20X Misc : 25ML C141

ALS Vial : 8 Sample Multiplier: 1

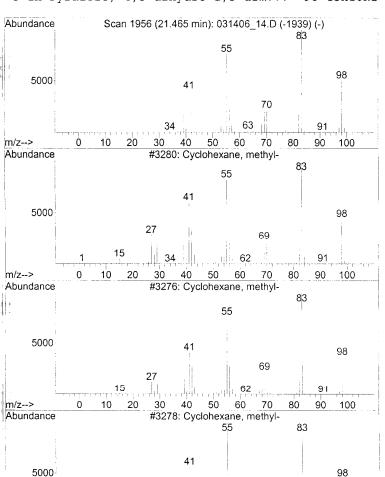
Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

'Quant Title :

TIC Library : C:\DATABASE\NISTO2.L TIC Integration Parameters: lscint.e

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.47	38.79 ppbV	10339800	1,4-difluorobenzene	18.26

Н	it# of 5	Tentative ID	MW	MolForm	CAS#	Qual
	Cyclohexane,			C7H14	000108-87-2	
	Cyclohexane,		98	C7H14	000108-87-2	91
	Cyclohexane,		98	C7H14	000108-87-2	90
. 4	Cyclohexane,	methyl-	98	C7H14	000108-87-2	86
5	1H-Pvrazole.	4.5-dihvdro-1.5-dim	98	C5H1 0N2	005775-96-2	64



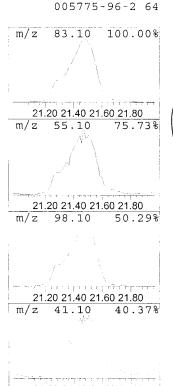
27

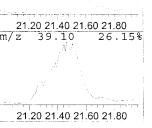
TOME 021805 NO MOTO Met 280 164026502 6000 FOR PROL 90 100

15

70

63





Pata Path : C:\MSDChem\1\DATA\2006_FEB\031506\ Data File : 031406 14.D 'Aca On : 16 Mar 2006 12:21 pm Operator : AF Sample : 06-061-5 20X Misc : 25ML C141 ALS Vial : 8 Sample Multiplier: 1 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M Quant Title : TIC Library : C:\DATABASE\NISTO2.1 TIC Integration Parameters: lscint.e Peak Number 3 Cyclohexane, methyl Concentration Rank 13 Area Relative to ISTD R.T. EstConc ______ 21.48 14.31 ppbV 3815490 1,4-difluorobenzene 18.26 Hit# of 5 Tentative ID MW MolForm CAS# Qual 1 Cyclohexane, methyl-98 C7H14 000108-87-2 94 2 Cyclohexane, methyl-3 Cyclohexane, methyl-4 Cyclohexane, methyl-98 C7H14 000108-87-2 93 98 C7H14 000108-87-2 91 4 Cyclohexane, methyl- 98 C7H14 5 1H-Pyrazole, 4,5-dihydro-4,5-dim... 98 C5H10N2 000108-87-2 90 028019-94-5 59 Abundance Scan 1957 (21.475 min): 031406_14.D (-1939) (-) m/z 83.10 100.00% 83 55 5000 98 21.20 21.40 21.60 21.80 m/z 55.10 73.64% 62 0 10 20 30 40 50 60 70 80 m/7--> Abundance #3280: Cyclohexane, methyl-21.20 21.40 21.60 21.80 m/z 98.10 48.58% 5000 98 27 . 11 34 62 0 10 20 30 40 50 60 70 80 90 100 m/z--> Abundance #3276: Cyclohexane, methyl-21.20 21.40 21.60 21.80 m/z 41.10 33.23% 5000 98 69 21.20 21.40 21.60 21.80 15 62 91 m/z 56.10 26.98% 0 10 20 30 40 50 60 70 80 90 100 Abundance #3281: Cyclohexane, methyl-5000 21.20 21.40 21.60 21.80 98 69 62 TOmb 02 1805 M Mon Mar 200 164026 503 6000 60 RP801 90 100 Page: 7

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\ Data File : 031406_14.D Acq On : 16 Mar 2006 12:21 pm Operator : AF Sample : 06-061-5 20X Misc : 25ML C141 ALS Vial : 8 Sample Multiplier: 1 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M Quant Title : TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e ************************ Peak Number 4 Cyclohexane, methyl-Concentration Rank 1 Area Relative to ISTD R.T. EstConc ------21.49 52.58 ppbV 14016700 1,4-difluorobenzene 18.26 Hit# of 5 Tentative ID MW MolForm CAS# Qual 98 C7H14 000108-87-2 91 98 C7H14 000108-87-2 91 1 Cyclohexane, methyl-2 Cyclohexane, methyl-3 Cyclohexane, methyl-98 C7H14 000108-87-2 91 4 Cyclohexane, methyl-98 C7H14 000108-87-2 87 5 1H-Pyrazole, 4,5-dihydro-4,5-dim... 98 C5H10N2 028019-94-5 64 Abundance Scan 1958 (21.485 min): 031406_14.D (-1939) (-) m/z 83.10 100.00% 55 5000 98 41 21.20 21.40 21.60 21.80 m/z 55.10 59.29% 0 10 20 30 40 50 60 70 80 90 100 #3281: Cyclohexane, methylm/z--> Abundance 55 21.20 21.40 21.60 21.80 m/z 98.10 47.68% 5000 41 27 62 76 91 0 10 20 30 40 50 60 70 80 90 100 m/z--> Abundance #3276: Cyclohexane, methyl-21.20 21.40 21.60 21.80 m/z 41.10 35.01% 55 69 27 21.20 21.40 21.60 21.80 15 62 91 m/z 56.10 m/z--> 0 10 20 30 40 50 60 70 80 90 100 Abundance #3280 Cyclobassa 7 #3280: Cyclohexane, methyl-5000 98 21.20 21.40 21.60 21.80 TO in E021805. NO MOTO M220 230 1640265034 62000 on RP801 90 100 Page: 8

```
Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
   Data File : 031406 14.D
   Acq On
           : 16 Mar 2006 12:21 pm
   Operator : AF
   Sample : 06-061-5 20X
  Misc
            : 25ML C141
   ALS Vial : 8 Sample Multiplier: 1
   Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
   Quant Title :
  TIC Library : C:\DATABASE\NIST02.L
  TIC Integration Parameters: lscint.e
  Peak Number 6 Cyclohexanc, 1,3-dimethyl-,... Concentration Rank 8
    R.T. EstConc
                              Area
                                       Relative to ISTD
           -----
                            ______
   24.20 17.52 ppbV 19755900 chlorobenzene-d5
                                                                     26.10
   Hit# of 5 Tentative ID
                                          MW MolForm CAS# Qual
            ______
   1 Cyclohexane, 1,3-dimethyl-, cis- 112 C8H16 000638-04-0 91
2 Cyclohexane, 1,3-dimethyl-, cis- 112 C8H16 000638-04-0 91
3 Cyclohexane, 1,4-dimethyl-, trans- 112 C8H16 002207-04-7 90
4 Cyclohexane, 1,3-dimethyl-, cis- 112 C8H16 000638-04-0 86
   5 Cyclohexane, 1,4-dimethyl-
                                                                000589-90-2 83
                                            112 C8H16
           Scan 2232 (24.200 min): 031406_14.D (-2223) (-) m/z 97.10 100.00%
  Abundance
      5000
                                                  112
                                                           23.80 24.00 24.20 24.40 24.60
                                                           m/z 55.10 65.36%
                             62
                                      83
  m/z-->
           10 20 30 40 50 60 70 80 90 100 110 120
                   #6639: Cyclohexane, 1,3-dimethyl-, cis-
  Abundance
                            55
                                                           23.80 24.00 24.20 24.40 24.60
                                                           m/z 112.10 31.63%
      5000
                                                 112
                           62 83
           <u>10 20 30 40 50 60 70 80 90 100 110 120</u>
  Abundance
                   #6637: Cyclohexane, 1,3-dimethyl-, cis-
                                                           23.80 24.00 24.20 24.40 24.60
                                                           m/z 41.10 15.78%
     5000
                                                 112
                                 69
                                                          23.80 24.00 24.20 24.40 24.60
                                                          m/z 56.10
          <u>10 20 30 40 50 60 70 80 90 100 110 120</u>
                  #6648: Cyclohexane, 1,4-dimethyl-, trans-
  Abundance
     5000
                                                        23.80 24.00 24.20 24.40 24.60
                                                 112
                                 69
                      62
TOTHE 021805.10 Man Man 20 150: 26040702086 ROUT1100 110 120
```

Page: 10

```
Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
  Data File : 031406_14.D
  Acq On
          : 16 Mar 2006 12:21 pm
  Operator : AF
  Sample : 06-061-5 20X
  Misc
           : 25ML C141
  ALS Vial : 8 Sample Multiplier: 1
  Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
  Quant Title :
  TIC Library : C:\DATABASE\NISTO2.L
  TIC Integration Parameters: lscint.e
                    *************
  Peak Number 8 Cyclohcxane, 1,1,3-trimethyl- Concentration Rank 9
    R.T. EstConc
                           Area Relative to ISTD
          -----
   26.37 16.09 ppbV 18141900 chlorobenzene-d5
                                                                    26.10
   Hit# of 5 Tentative ID
                                           MW MolForm CAS# Qual
                  1 Cyclohexane, 1,1,3-trimethyl- 126 C9H18 003073-66-3 92 L

2 Cyclohexane, 1,1,3-trimethyl- 126 C9H18 003073-66-3 91

3 Cyclohexane, 1,1,3-trimethyl- 126 C9H18 003073-66-3 91

4 Cyclohexane, 1,1,3-trimethyl- 126 C9H18 003073-66-3 91

5 Cyclohexane, 1,3,5-trimethyl- 126 C9H18 001839-63-0 72
              Scan 2452 (26.365 min): 031406_14.D (-2446) (-)
                                                         m/z 111.10 100.00%
                        69
     5000
                                                           26.00 26.20 26.40 26.60
                                                         m/z 69.10 65.24%
                                     126
                                                  180
                  80 100 120 140
                                              160 180
                #11239: Cyclohexane, 1,1,3-trimethyl-
  Abundance
                       69
                                                          26.00 26.20 26.40 26.60
                                                          m/z 55.10 30.69%
     5000
                 41
                              95
                          80 100 120 140 160 180
                     60
  m/z-->
                40
  Abundance
                   #11223: Cyclohexane, 1,1,3-trimethyl-
                                                          26.00 26.20 26.40 26.60
                        69
                                                         m/z 41.10
                                                                        21.32%
     5000
                                                          26.00 26.20 26.40 26.60
                                    126
          15
                                                          m/z 83.10 18.66%
                         80 100 120 140
                   60
            20
                                                  180
  Abundance
                   #11238: Cyclohexane, 1,1,3-trimethyl-
                        69
                    55
     50001
                                                         26.00 26.20 26.40 26.60
                           83
                      95
TOmbE-021805 MPOMOn4Mar 600 18026:400 20206 R1401 160 180
```

Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\

Data File : 031406 14.D

```
Acq On : 16 Mar 2006 12:21 pm Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1
Quant Method: C:\MSDCHEM\1\METHODS\T015021805.M
Quant Title :
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e
*********************
Peak Number 10 Octane, 3-methyl-
                                            Concentration Rank 6
                      Area Relative to ISTD
  R.T. EstConc
 -----
 27.31 19.95 ppbV 22505900 chlorobenzene-d5 26.10
 Hit# of 5 Tentative ID
                                    MW MolForm CAS# Qual
-----
 1 Octane, 3-methyl-
2 Octane, 3-methyl-
                                   128 C9H20 002216-33-3 90
128 C9H20 002216-33-3 87
3 Heptane, 2,5-dimethyl-
4 Octane, 3-methyl-
5 Heptane, 2,5-dimethyl-
                                   128 C9H20
                                                     002216-30-0 81
                                   128 C9H20
                                                     002216-33-3 74
002216-30-0 70
                                    128 C9H20
                                                m/z 57.10 100.00%
Abundance
          Scan 2549 (27.306 min): 031406_14.D (-2539) (-)
   5000
                41
                                                   27.00 27.20 27.40 27.60
                                 98
                                                  m/z 41.10 28.22%
                        71
84
113
128
m/z--> 10 20 30 40 50 60 70 80 90 100 110 120 130
Abundance
                   #12266: Octane, 3-methyl-
                                                   27.00 27.20 27.40 27.60
                                                  m/z 43.10 26.02%
   5000
                 43
             29
                        71 84
                                113 128
              10 20 30 40 50 60 70 80 90 100 110 120 130
                  #12258: Octane, 3-methyl-
Abundance
                                                  27.00 27.20 27.40 27.60
                                                  m/z 56.10 21.87%
   5000
                 43
             29
                                                  27.00 27.20 27.40 27.60
           50
                         /1 85 113 128
                                                  m/z 98.10 21.18%
      10 20 30 40 50 60 70 80 90 100 110 120 130
                #12275: Heptane, 2,5-dimethyl-
Abundance
                                               27.00 27.20 27.40 27.60
   5000
                             85
                   50
m.520.9180510M 2000n30Ma #0 2 50 1 660 2 670 4 280 2 0 906 120 T110 120 130
```

Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\ Data File : 031406 14.D Acq On : 16 Mar 2006 12:21 pm Operator : AF Sample : 06-061-5 20X Misc : 25ML C141 ALS Vial : 8 Sample Multiplier: 1 Quant Method: C:\MSDCHEM\1\METHODS\T015021805.M Quant Title : TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e ************** Peak Number 12 4-Octen-3-one Concentration Rank 7 Area R.T. EstConc Relative to ISTD 27.83 18.25 ppbV 20580500 chlorobenzene-d5 26.10 ovknomu Hit# of 5 Tentative ID Hit# of 5 Tentative ID MW MolForm CAS# Qual 126 C8H14O 014129-48-7 72 126 C9H18 053941-19-8 72 1 4-Octen-3-one 2 2-Hexene, 3,4,4-trimethyl-3 3,5-Dimethyl-3-heptene 4 Thiophene, 2-propyl-053941-19-8 72 059643-68-4 72 001551-27-5 64 126 C9H18 126 C7H10S 5 Furan, 2,3-dihydro-4-(1-methylpr... 126 C8H140 034379-54-9 64 Scan 2603 (27.829 min): 031406_14.D (-2598) (-) m/z 97.10 100.00% 55 5000 27.60 27.80 28.00 28.20 126 62 69 81 m/z 55.10 54.83% m/z--> 10 20 30 40 50 60 70 80 90 100 110 120 130 Abundance #10967: 4-Octop 2 ccc 55 27.60 27.80 28.00 28.20 m/z 126.20 20.31% 5000 41 126 69 83 111 10 20 30 40 50 60 70 80 90 100 110 120 130 Abundance #11207: 2-Hexene, 3,4,4-trimethyl-27.60 27.80 28.00 28.20 m/z 96.10 14.86% 5000 69 27 62 76 83 111 40 50 60 70 60 126 27.60 27.80 28.00 28.20 m/z 41.10 13.41% 10 20 30 40 50 60 70 80 90 100 110 120 130 #11185: 3,5-Dimethyl-3-heptene Abundance 55 5000 27.60 27.80 28.00 28.20 126 Omb 180510M 200n3Mart0 20501660267013802006 ROT 110 120 130

```
Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
 Data File : 031406_14.D
 Acq On : 16 Mar 2006 12:21 pm
 Operator : AF
 Sample : 06-061-5 20X
 Misc
          : 25ML C141
ALS Vial : 8 Sample Multiplier: 1
 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
 Quant Title :
 TIC Library : C:\DATABASE\NIST02.1.
 TIC Integration Parameters: lscint.e
 Peak Number 15 1-Ethyl-3-methylcyclohexane... Concentration Rank 11
        EstConc
                        Area Relative to ISTD
         -------
                        28.35 14.92 ppbV 16825800 chlorobenzene-d5 26.10
                                                                           MKNOWN
 Hit# of 5 Tentative ID
                                 MW MolForm CAS# Qual
           .------
 1 1-Ethyl-3-methylcyclohexane (c,t) 126 C9H18 003728-55-0 64
 2 cis-1-Ethyl-3-methyl-cyclohexane 126 C9H18
3 1H-Pyrazole, 4,5-dihydro-3-methy... 126 C7H14N2
                                                         019489-10-2 64
                                                        026964-49-8 59
 4 Cyclohexane, 1-ethyl-2-methyl- 126 C9H18 5 Cyclohexane, 1-ethyl-4-methyl-, ... 126 C9H18
                                                         003728-54-9 59
                                                          006236-88-0 59
Abundance
             Scan 2657 (28.353 min): 031406_14.D (-2653) (-)
                                                  m/z 97.10 100.00%
                     55
    5000
                                         125
                                                      28.00 28.20 28.40 28.60
                           83
                                                     m/z 55.10
                                                                  59.24%
m/z-->
       10 20 30 40 50 60 70 80 90 100 110 120 130 140
           #11251: 1-Ethyl-3-methylcyclohexane (c,t)
Abundance
                     55
                                                      28.00 28.20 28.40 28.60
    5000
                                                     m/z 69.10 41.87%
                                         126
        10 20 30 40 50 60 70 80 90 100 110 120 130 140
        #11249: cis-1-Ethyl-3-methyl-cyclohexane
Abundance
                                                     28.00 28.20 28.40 28.60
                                                     m/z 125.20 35.29%
                     55
   5000
                 41
                         69
                                         126
             29
                            81
                                                     28.00 28.20 28.40 28.60
                                                     m/z 41.10 25.81%
       10 20 30 40 50 60 70 80 90 100 110 120 130 140
           #10897: 1H-Pyrazole, 4,5-dihydro-3-methyl-1-propyl-
Abundance
    5000
                                                      28.00 28.20 28.40 28.60
                                         126
11.502180510M 200180Mate 250 166:266:808 900 0160 RECT 120 130 140
                                                                                  Page: 18
```

```
Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
  Data File : 031406_14.D
  Acq On : 16 Mar 2006 12:21 pm
  Operator : AF
  Sample : 06-061-5 20X
  Misc
            : 25ML C141
  ALS Vial : 8 Sample Multiplier: 1
  Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
  Quant Title :
  TIC Library : C:\DATABASE\NIST02.1.
  TIC Integration Parameters: lscint.e
  Peak Number 16 1-Cyclobutanone, 2 (2 methyl... Concentration Rank 3
    R.T. EstConc
                            Area Relative to ISTD
           ------
                            28.69 25.70 ppbV 28981200 chlorobenzene-d5
                                                                     26.10
   Hit# of 5 Tentative ID
                                      MW MolForm CAS# Qual
   1 1-Cyclobutanone, 2-(2-methyl-1-pr... 124 C8H12O 091531-45-2 53 21,3-Pentadiene, 2-methyl-, (E)- 82 C6H10 000926-54-5 43 005715-25-3 43 5-Bromo-1-hexene
   2 1,3-Pentadiene, 2-methyl-, (E)- 82 C6H10
3 2-Cyclohexen-1-one, 4,5-dimethyl- 124 C8H120
                                                             005715-25-3 43
004558-27-4 38
   4 5-Bromo-1-hexene
   5 Cyclopentene, 1-methyl-
                                          162 C6H11Br
                                             82 C6H10
                                                                 000693-89-0 38
             Scan 2692 (28.692 min): 031406_14.D (-2687) (-) m/z 82.10 100.00%
  Abundance
                         57 67
      5000
                                                              28.40 28.60 28.80 29.00
                        ull
                                    109
                                                       m/z 67.10 99.80%
        10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
  m/z-->
              #10239: 1-Cyclobutanone,2-(2-methyl-1-propenyl)
  Abundance
                                                              28.40 28.60 28.80 29.00
      5000
                                                            m/z 57.10 81.21%
                 <sup>96</sup> 109 124
         10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
  Abundance
                   #1239: 1,3-Pentadiene, 2-methyl-, (E)-
                                                            28.40 28.60 28.80 29.00
                                                           m/z 81.10 76.67%
      5000
                   39
                       53
                                                            28.40 28.60 28.80 29.00
                                                           m/z 41.10 66.52%
 m/z--> 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Abundance #10216: 2-Cyclohexen-1-one, 4,5-dimethyl-
                                82
                                             124
     5000
                                                            28.40 28.60 28.80 29.00
                   39
10th 502 180510M 200130 Mater 30 806: 706: 809 000 000 PROTICO 130 140 150
```

Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\ Data File : 031406 14.D Acq On : 16 Mar 2006 12:21 pm Operator : AF Sample : 06-061-5 20X : 25ML C141 ALS Vial : 8 Sample Multiplier: 1 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M Add w/ Q peak Q 28.91 Min Quant Title : TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e Peak Number 17 Octane, 2,6-dimethyl-Concentration Rank 4 Area Relative to ISTD R.T. EstConc ------28.90 25.00 ppbV 28192700 chlorobenzene-d5 26.10 Hit# of 5 Tentative ID MW MolForm CAS# Qual 1 Octane, 2,6-dimethyl-142 C10H22 002051-30-1 86 V 2 Octane, 2,6-dimethyl-3 Octane, 2,6-dimethyl-142 C10H22 002051-30-1 46 142 C10H22 002051-30-1 45 4 Cyclohexane, ethyl-112 C8H16 001678-91-7 41 5 Nonane, 3-methyl-142 C10H22 005911-04-6 41 Scan 2713 (28.896 min): 031406 14.D (-2705) (-) m/z 57.10 100.00% 71 5000 28.60 28.80 29.00 29.20 113 126 m/z 55.10 70.19% m/z--> 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 #18460: Octane, 2,6-dimethyl-Abundance 57 W. A. A. A. S. A. 28.60 28.80 29.00 29.20 m/z 41.10 69.72% 5000i 29 97 127 142 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Abundance #18455: Octane, 2,6-dimethyl-28.60 28.80 29.00 29.20 m/z 83.10 66.13% 43 5000 28.60 28.80 29.00 29.20 99 127 142 71.10 60.80% 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Abundance #18443: Octane, 2,6-dimethyl-5000 28.60 28.80 29.00 29.20 85 113 85 97 | 127 TOM 509 180 50 M 20 030 M 40 500 606 : 7206 : 80 9 920 000 P19T120 130 140 150 Page: 20

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\ Data File : 031406 14.D Acq On : 16 Mar 2006 12:21 pm Operator : AF : 06-061-5 20X Sample Misc : 25ML C141 ALS Vial : 8 Sample Multiplier: 1 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M Quant Title : TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e Add M 2 Peac 2 28.90 ********************* Pcak Number 18 Octane, 2,6-dimethyl- Concentration Rank 5 Area Relative to ISTD R.T. EstConc 28.91 20.96 ppbV 23638800 chlorobenzene-d5 26.10 MW MolForm CAS# Qual Hit# of 5 Tentative ID 1 Octane, 2,6-dimethyl- 142 C10H22 002051-30-1 80 2 Cyclohexane, propyl- 126 C9H18 001678-92-8 55 2 Cyclohexane, propyl-3 Cyclohexane, propyl-4 Cyclohexane, propyl-5 Cyclohexane, propyl-126 C9H18 001678-92-8 49 001678-92-8 49 126 C9H18 126 C9H18 001678-92-8 46 Scan 2714 (28.906 min): 031406_14.D (-2705) (-) Abundance m/z 83.10 100.00% 57 5000 113 126 28.60 28.80 29.00 29.20 m/z 57.10 85.80% خأشجت حالليلج جيلاللوس وتقاطحت m/z--> 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Abundance #18460: Octane, 2,6-dimethyl-71 28.60 28.80 29.00 29.20 m/z 55.10 5000 29 113 85 97 127 142 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Abundance #11176: Cyclohexane, propyl-28.60 28.80 29.00 29.20 m/z 41.10 71.43% 5000 126 28.60 28.80 29.00 29.20 71.10 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Abundance #11175: Cyclohexane, propyl-5000 28.60 28.80 29.00 29.20 126 97 108 TO/11/20.9 1 8 0 51 0 M 2 M 0 13 0 M 40 2 500 606 : 7206 : 850 92 0 0050 12/10 T120 130 140 150 Page: 21

```
Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\
 Data File : 031406 14.D
 Acq On : 16 Mar 2006 12:21 pm Operator : AF
 Sample : 06-061-5 20X
         : 25ML C141
 Misc
 ALS Vial : 8 Sample Multiplier: 1
 Quant Method: C:\MSDCHEM\1\METHODS\T015021805.M
 Ouant Title :
 TIC Library : C:\DATABASE\NIST02.L
 TIC Integration Parameters: lscint.e
 *****************
 Peak Number 25 Benzene, 1,2,3-trimethyl-
                                          Concentration Rank 10
                               Relative to ISTD
  R.T. EstConc
                        Area
                                                        R.T.
 _____
  30.12 15.58 ppbV 17571500 chlorobenzene-d5
                                                       26.10
                                   MW MolForm CAS#
  Hit# of 5 Tentative ID
                                                            Qual
 _____
  1 Benzene, 1,2,3-trimethyl- 120 C9H12 000526-73-8 89
                                                   000095-63-6 86 =
                                  120 C9H12
  2 Benzene, 1,2,4-trimethyl-
                                                   000108-67-8 86
                                                                      isomer.
  3 Benzene, 1,3,5-trimethyl-
                                   120 C9H12
                                                    000526-73-8 86
                                                                      huts in surples
                                   120 C9H12
  4 Benzene, 1,2,3-trimethyl-
                                                    000108-67-8 83
  5 Benzene, 1,3,5-trimethyl-
                                   120 C9H12
                                               m/z 105.10 100.00%
            Scan 2839 (30.117 min): 031406_14.D (-2831) (-)
                                105
                                    120
    5000
                   55
                                                 29.80 30.00 30.20 30.40
                      67 77
                                        140
                                                m/z 97.10 60.56%
                     10 20 30 40 50 60 70 80 90 100 110 120 130 140
                #9123: Benzene, 1,2,3-trimethyl-
                                                 29.80 30.00 30.20 30.40
                                    120
                                                m/z 120.10
    5000
         15 27 39 51 65 77 91
           صلحت علان بالمراجع
       10 20 30 40 50 60 70 80 90 100 110 120 130 140
                 #9124: Benzene, 1,2,4-trimethyl-
 Abundance
                                                 29.80 30.00 30.20 30.40
                                                m/z 55.10
                                                           43.69%
                                    120
    5000
                                                 29.80 30.00 30.20 30.40
            27 41 51 65
                                                    95.10 19.84%
                                                m/z
       10 20 30 40 50 60 70 80 90 100 110 120 130 140
 m/z-->
                 #9122: Benzene, 1,3,5-trimethyl-
 Abundance
                                    120
                                                 29.80 30.00 30.20 30.40
    5000
                         وأبار والصوبات
Page: 27
```

Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\ Data File : 031406 14.D Acq On : 16 Mar 2006 12:21 pm Óperator : AF Sample : 06-061-5 20X Misc : 25ML C141 ALS Vial : 8 Sample Multiplier: 1 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M Quant Title : TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e ***************** Peak Number 22 1R, 2c, 3t, 4t-Tetramethyl-cyc... Concentration Rank 12 R.T. Relative to ISTD R.T. EstConc Area .______ 29.64 14.52 ppbV 16379100 chlorobenzene-d5 26.10 MW MolForm CAS# Hit# of 5 Tentative ID 1 1R,2c,3t,4t-Tetramethyl-cyclohexane 140 C10H20 1000144-07-3 49 004057-42-5 43 2 2-Octene, 2,6-dimethyl- 140 C10H20 054063-09-1 42 140 C10H20 3 Diisoamylene 4 Cyclohexane, 1,2,4-trimethyl- 126 C9H18 5 4-Octene, 2,6-dimethyl-, [S-(E)]- 140 C10H20 002234-75-5 38 062960-76-3 35 m/z 69.10 100.00% Scan 2790 (29.642 min): 031406_14.D (-2788) (-) Abundance 41 55 111 5000 29.40 29.60 29.80 30.00 m/z 41.10 80.85% 30 40 50 60 70 80 90 100 110 120 130 140 #17384: 1R,2c,3t,4t-Tetramethyl-cyclohexane Abundance -11 MAVM - A.A.M.29.40 29.60 29.80 30.00 m/z 125.15 80.51% 5000 111 124 140 97 31 30 40 50 60 70 80 90 100 110 120 130 140 m/z--> 29.40 29.60 29.80 30.00 #17330: 2-Octene, 2,6-dimethyl-Abundance 69 m/z 70.10 79.52% 41 55 5000 140 97 111 29.40 29.60 29.80 30.00 125 ے پرزال کیلن 71.10 69.41% 40 50 60 70 80 90 100 110 120 130 140 m/z--> #17270: Diisoamylene Abundance 55 70 29.40 29.60 29.80 30.00 5000

TOME 021805. 30 Men Mor 600 706: 26: 506 3000 6118 P120 130 140

TILS (eforced Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\ Data File : 031406 14.D Acq On : 16 Mar 2006 12:21 pm Operator : AF Sample : 06-061-5 20X : 25ML C141 Misc ALS Vial : 8 Sample Multiplier: 1 Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M Ouant Title : TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e ******************** Peak Number 9 Octane, 4-methyl-Concentration Rank 14 Area Relative to ISTD R.T. R.T. EstConc -----27.09 13.34 ppbV 15046500 chlorobenzene-d5 26.10 MW MolForm CAS# Hit# of 5 Tentative ID · 128 C9H2O 002216-34-4 64 1 Octane, 4-methyl-002216-34-4 64 128 C9H2O 2 Octane, 4-methyl-3 Octane, 4-methyl-002216-34-4 62 128 C9H2O 4 Hexane, 2,3,4-trimethyl-5 Hexane, 3,3-dimethyl-128 C9H20 000921-47-1 59 000563-16-6 59 114 C8H18 5 Hexane, 3,3-dimethylm/z 43.10 100.00% Scan 2527 (27.093 min): 031406_14.D (-2523) (-) 5000 57 26.80 27.00 27.20 27.40 46.228 m/z 71.10 98 113 128 - علاد باللم بالألمانية m/z--> 20 30 40 50 60 70 80 90 100 110 120 130 Abundance #12256: Octane, 4-methyl-26.80 27.00 27.20 27.40 m/z 85.10 40.30% 5000 98 113 128 50 78 m/z--> 20 30 40 50 60 70 80 90 100 110 120 130 26.80 27.00 27.20 27.40 #12263: Octane, 4-methyl-Abundance 43 m/z 57.10 37.66% 5000 85 26.80 27.00 27.20 27.40
 36
 50

 20
 30

 40
 50

 60
 70

 80
 90

 100
 110

 120
 130
 m/z 41.10 32.95% m/z--> #12259: Octane, 4-methyl-Abundance 85 26.80 27.00 27.20 27.40 5000 29 thro 9180520M Mon 40ar5020 606: 706: 480 2900 610 PT10 120 130

Data Path : C:\MSDChcm\1\DATA\2006_FEB\031506\

```
Data File: 031406 14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1
 Ouant Method : C:\MSDCHEM\1\METHODS\T015021805.M
 Quant Title :
 TIC Library : C:\DATABASE\NIST02.L
 TIC Integration Parameters: lscint.e
 *******************
 Peak Number 21 2,2,7,7-Tetramethyloctane Concentration Rank 15
                                    Relative to ISTD
                          Area
   R.T. EstConc
  _____
  29.60 12.88 ppbV 14524800 chlorobenzene-d5 26.10
 Hit# of 5 Tentative ID MW MolForm CAS# Qual
  1 2,2,7,7-Tetramethyloctane 170 C12H26 001071-31-4 50 2 Tridecane, 2,5-dimethyl- 212 C15H32 056292-66-1 42
 2 Tridecane, 2,5-dimethyl- 212 C15H32
2 Todecane, 2,6,6-trimethyl- 184 C13H28
4 Tetradecane, 2,5-dimethyl- 226 C16H34
5 Decane, 2,5,6-trimethyl- 184 C13H28
                                                            062108-24-1 42
                                                            056292-69-4 40
                                                             062108-23-0 38
              Scan 2786 (29.604 min): 031406_14.D (-2783) (-) m/z 69.10 100.00%
 Abundance
                  57 69 111
     5000
               41
                        85 99
                                                       29.20 29.40 29.60 29.80 30.00
m/z 57.10 94.078
                                                                     94.07%
            20 40 60 80 100 120 140 160 180 200
 m/z-->
                   #36194: 2,2,7,7-Tetramethyloctane
 Abundance
                                                       29.20 29.40 29.60 29.80 30.00
                                                        m/z 111.10 93.43%
     5000
                                   155
           20 40 60 80 100 120 140 160 180 200
  m/z-->
                                                        29.20 29.40 29.60 29.80 30.00
                    #64584: Tridecane, 2,5-dimethyl-
  Abundance
                                                        m/z 56.10 48.78%
     5000
                43
                       112 127 140 155 169 183 197 212
                                                        29.20 29.40 29.60 29.80 30.00
          15
                                                        m/z 55.10
           20 40 60 80 100 120 140 160 180 200
 m/z-->
                    #45602: Decane, 2,6,6-trimethyl-
  Abundance
                                                        29.20 29.40 29.60 29.80 30.00
     5000
                     71
                                       169
TOME 02 1805. M20Mo 40 Ma 50 208016 120 : 320 20400 ROBT 1180 200
```

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406 14.D

```
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1
Quant Method: C:\MSDCHEM\1\METHODS\T015021805.M
 Ouant Title :
 TIC Library : C:\DATABASE\NIST02.L
 TIC Integration Parameters: lscint.e
 *****************
                                                  Concentration Rank 17
 Peak Number 19 Heptane, 4-propyl-
  R.T. EstConc Area Relative to ISTD R.T
  29.11 12.35 ppbV 13932800 chlorobenzene-d5 26.10
                                       MW MolForm CAS# Qual
  Hit# of 5 Tentative ID
  ._____
  1 Heptane, 4-propyl- 142 C10H22 003178-29-8 59
2 Heptane, 3-ethyl-2-methyl- 142 C10H22 014676-29-0 59
3 Heptane, 3-ethyl-2-methyl- 142 C10H22 014676-29-0 58
4 Octane, 2,3-dimethyl- 142 C10H22 007146-60-3 58
5 Undecame 6-methyl- 170 C12H26 017302-33-9 53
                                         170 C12H26
                                                             017302-33-9 53
  5 Undecane, 6-methyl-
             Scan 2735 (29.109 min): 031406_14.D (-2732) (-) m/z 57.10 100.00%
                   43
                                  98
    5000
                        69
85
111 121 140
                                                     28.80 29.00 29.20 29.40
                                                        m/z 43.10
                                                                      49.08%
       10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
          #18436: Heptane, 4-propyl-
 Abundance
                                                         28.80 29.00 29.20 29.40
                                                        m/z 98.10 46.88%
     5000
                                   98
        29 70 83 112 142
10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
            #18483: Heptane, 3-ethyl-2-methyl-
                                                        28.80 29.00 29.20 29.40
  Abundance
                      57
                                                         m/z 41.10 34.39%
                              98 | 113 | 142 | 7
                                                          28.80 29.00 29.20 29.40
       10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
          #18480: Heptane, 3-ethyl-2-methyl-
  Abundance
                                                       28.80 29.00 29.20 29.40
     5000
TO A 150 2180510M 200 30 Mater 300 606:206:801 9200000 RMOT120 130 140 150
```

```
Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406 14.D
Acq On : 16 Mar 2006 12:21 pm
 Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
 ALS Vial : 8 Sample Multiplier: 1
 Ouant Method: C:\MSDCHEM\1\METHODS\T015021805.M
 Quant Title :
 TIC Library : C:\DATABASE\NIST02.L
 TIC Integration Parameters: lscint.e
 ******************
                                          Concentration Rank 18
 Peak Number 23 Nonane, 3-methyl-
                       Area Relative to ISTD
  R.T. EstConc
  .....
  29.70 11.50 ppbV 12965400 chlorobenzene-d5
                                                       26.10
                                   MW MolForm CAS# Qual
  Hit# of 5 Tentative ID
 142 C10H22 005911-04-6 91
142 C10H22 005911-04-6 91
  1 Nonane, 3-methyl-
  2 Nonane, 3-methyl-
                                  142 C10H22
  3 Nonane, 3-methyl-
                                                  005911-04-6 83
                                                  015869-94-0 74
                                  142 C10H22
  4 Octane, 3,6-dimethyl-
                                  204 C10H22
                                                   007664-80-4 72
  5 Octyl thioglycolate
            Scan 2796 (29.701 min): 031406_14.D (-2794) (-)
                                           m/z 57.10 100.00%
    5000
                                 112
                                                29.40 29.60 29.80 30.00
                                              m/z 71.10 70.83%
 m/z--> 10 20 30 40 50 60 70 80 90 100 110 120 130 140
 Abundance #18429: Nonane, 3-methyl-
                    57
                                                 29.40 29.60 29.80 30.00
                                                m/z 43.10 54.17%
                43
    5000
             29
      15 85 98 127 142
10 20 30 40 50 60 70 80 90 100 110 120 130 140
                  #18432: Nonane, 3-methyl-
                                                 29.40 29.60 29.80 30.00
                                                m/z 56.10 29.82%
                       71
    5000
             29
                          85 98 112 127 142
                                                 29.40 29.60 29.80 30.00
                                                m/z 41.10
       10 20 30 40 50 60 70 80 90 100 110 120 130 140
                #18433: Nonane, 3-methyl-
  Abundance
                                                  29.40 29.60 29.80 30.00
    5000
             29
     15
TO 115292180510M 200 130M 240 250 166: 206: 807 900 960 1880T120 130 140
```

```
Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\
 Data File : 031406_14.D
        : 16 Mar 2006 12:21 pm
 Acq On
 Operator : AF
 Sample : 06-061-5 20X
         : 25ML C141
 Misc
 ALS Vial : 8 Sample Multiplier: 1
 Quant Method: C:\MSDCHEM\1\METHODS\T015021805.M
 Quant Title :
 TIC Library : C:\DATABASE\NIST02.L
 TIC Integration Parameters: lscint.e
 *************
                                            Concentration Rank 20
 Peak Number 14 Nonane
                        Area Relative to ISTD
   R.T. EstConc
  _____
  28.02 9.06 ppbV 10221700 chlorobenzene-d5
                                                         26.10
                                    MW MolForm CAS#
  Hit# of 5 Tentative ID
 _____
                                   128 C9H2O 000111-84-2 81
128 C9H2O 000111-84-2 64
  1 Nonane
  2 Nonane
  3 3-Hexanone, 2,5-dimethyl-
                                   128 C8H16O
                                                    001888-57-9 53
  4 Undecane, 2,4-dimethyl-
                                   184 C13H28
                                                     017312-80-0 50
                                    128 C9H20
                                                     000111-84-2 49
  5 Nonane
             Scan 2623 (28.023 min): 031406_14.D (-2615) (-) m/z 43.10 100.00%
 Abundance
    5000
                              85
                         71
                                              27.60 27.80 28.00 28.20 28.40
                                  99 109
                                              m/z 57.10 95.60%
                                          128
                 50
       10 20 30 40 50 60 70 80 90 100 110 120 130
 m/z-->
                      #12251: Nonane
 Abundance
                      57
                                                 27.60 27.80 28.00 28.20 28.40
                                                 m/z 41.10 48.54%
    5000
                             85
                         71
             29
                         1 99
                 50 ||
         15
       10 20 30 40 50 60 70 80 90 100 110 120 130
 Abundance
                      #12253: Nonane
                                                 27.60 27.80 28.00 28.20 28.40
                                                 m/z 85.10 44.69%
    5000
             29
                                         128
                                                 27.60 27.80 28.00 28.20 28.40
                 50 78 92 99
                                                  m/z 71.10 28.99%
        10 20 30 40 50 60 70 80 90 100 110 120 130
 m/z-->
                 #12186: 3-Hexanone, 2,5-dimethyl-
 Abundance
                      57
                              85
                                                 27.60 27.80 28.00 28.20 28.40
    5000
                                          128
TO the 02180510M 200n30Ma #0 2 050 1 050 2 0704 4802 0 905 ROOT 110 120 130
```

```
Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\
   Data File : 031406 14.D
   Acq On : 16 Mar 2006 12:21 pm
   Operator : AF
   Sample : 06-061-5 20X
                         : 25ML C141
   Misc
   ALS Vial : 8 Sample Multiplier: 1
   Quant Method: C:\MSDCHEM\1\METHODS\T015021805.M
   Ouant Title :
   TIC Library : C:\DATABASE\NIST02.L
    TIC Integration Parameters: lscint.e
                                         Peak Number 13 Cyclohexane, 1-ethyl-4-meth... Concentration Rank 21
        R.T. EstConc
                                                               Area
                                                                                        Relative to ISTD
                                                          ______
     27.90 9.04 ppbV 10199900 chlorobenzene-d5
                                                                                                                                                    26.10
                                                                                              MW MolForm CAS# Qual
     Hit# of 5 Tentative ID
     1 Cyclohexane, 1-ethyl-4-methyl-, ... 126 C9H18 006236-88-0 91
                                                                                                                                       006236-88-0 91
     2 Cyclohexane, 1-ethyl-4-methyl-, ... 126 C9H18
     3 cis-1-Ethyl-3-methyl-cyclohexane 126 C9H18
4 1-Ethyl-3-methylcyclohexane (c,t) 126 C9H18
                                                                                                                                        019489-10-2 86
                                                                                                                                        003728-55-0 80
     5 1-Ethyl-4-methylcyclohexane
                                                                                              126 C9H18
                                                                                                                                           003728-56-1 78
    Abundance
                                   Scan 2610 (27.897 min): 031406_14.D (-2607) (-)
                                                                                                                             m/z 97.10 100.00%
                                                 55
           5000
                                                                                                           126
                                                                                                                                   27.60 27.80 28.00 28.20
                                                             69
                                                                                                                                m/z 55.10
                                                                                                                                                           71.80%
                                                                      81
                                                                                              111
                            30 40 50 60 70 80 90 100 110 120 130
                                    #11262: Cyclohexane, 1-ethyl-4-methyl-, trans-
    Abundance
                                                                                                                                    27.60 27.80 28.00 28.20
                                                                                                                                m/z 96.10
                                                                                                                                                           28.71%
           5000
                                                                                                           126
                                                                                               111
                                      Lill.
                     20 30 40 50 60 70 80 90 100 110 120 130
    Abundance
                                    #11264: Cyclohexane, 1-ethyl-4-methyl-, trans-
                                                                                                                                    27.60 27.80 28.00 28.20
                                                 55
                                                                                                                                m/z 126.15
           5000
                                      41
                          27
                                                                                                           126
                                                                                                                                    27.60 27.80 28.00 28.20
                                         48 62
                                                                                                                                           41.10
                                                                                                                                                               20.48%
                                                                                                                                 m/z
                            30 40 50 60 70 80 90 100 110 120 130
    m/z-->
    Abundance
                                        #11249: cis-1-Ethyl-3-methyl-cyclohexane
                                                  55
                                                                                                                                    27.60 27.80 28.00 28.20
            5000
                                                             69
                                                                                                           126
                                       ب المراجعة ا
TO the 0918090M 900n 40 ar 5020 606: 206: 20 2000 610 0 P 1 1 0 1 2 0 1 3 0
```

```
Data Path : C:\MSDChcm\1\DATA\2006 FEB\031506\
 Data File : 031406 14.D
 Acq On : 16 Mar 2006 12:21 pm
 Operator : AF
 Sample : 06-061-5 20X
 Misc
           : 25ML C141
 ALS Vial : 8 Sample Multiplier: 1
 Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
 Quant Title :
 TIC Library : C:\DATABASE\NIST02.L
 TIC Integration Parameters: lscint.e
  *******************
 Peak Number 20 Benzene, propyl-
                                                    Concentration Rank 25
                             Area Relative to ISTD
   R.T. EstConc
  29.22 8.09 ppbV 9124500 chlorobenzene-d5
                                           MW MolForm CAS# Qual
  Hit# of 5 Tentative ID
  1 Benzene, propyl- 120 C9H12 000103-65-1 42
2 Benzene, propyl- 120 C9H12 000103-65-1 38
  2 Benzene, propyl- 120 C9H12 000103-65-1 38
3 Benzene, propyl- 120 C9H12 000103-65-1 38
4 N-Benzyl-2-phenethylamine 211 C15H17N 003647-71-0 27
5 1-Benzylamino-2-benzyloxyethane 241 C16H19NO 038336-06-0 27
               Scan 2746 (29.216 min): 031406_14.D (-2741) (-)
                                                          m/z 91.10 100.00%
  Abundance
     5000
                                            120
                                                               29.00 29.20 29.40 29.60
                      55
                                                          m/z 95.10 32.68%
                                                138
 m/z--> 10 20 30 40 50 60 70 80 90 100 110 120 130 140
 Abundance #9109: Benzene, propyl-
                                                               29.00 29.20 29.40 29.60
                                                           m/z 120.10 29.52%
     5000
                                            120
                          65 78 105
              27 39 51
         10 20 30 40 50 60 70 80 90 100 110 120 130 140
                       #9107: Benzene, propyl-
                                                             29.00 29.20 29.40 29.60
                                                          m/z 125.15 25.70%
     5000
                                            120
          15 27 39 51 65 78
                                                               29.00 29.20 29.40 29.60
                                      105
         10 20 30 40 50 60 70 80 90 100 110 120 130 140
 m/z-->
 Abundance
                        #9108: Benzene, propyl-
                                                               29.00 29.20 29.40 29.60
     5000
                                            120
                                       105
TO 115-0-2 1 8 0 510 M 2010-30 Mater 300 606 : 206 : 801 90 0 600 R ROT 120 130 140
```

Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\

Data File : 031406_14.D

Acq On : 16 Mar 2006 12:21 pm

Operator : AF Sample : 06-061-5 20X : 25ML C141 Misc ALS Vial : 8 Sample Multiplier: 1 Quant Method: C:\MSDCHEM\1\METHODS\T015021805.M Ouant Title : TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e Peak Number 5 Heptane, 3-methyl-Concentration Rank 22 Area Relative to ISTD R.T. EstConc _____ 24.03 8.99 ppbV 10134100 chlorobenzene-d5 26.10 Hit# of 5 Tentative ID MW MolForm CAS# Qual 114 C8H18 000589-81-1 91 114 C8H18 000589-43-5 81 1 Heptane, 3-methyl-2 Hexane, 2,4-dimethyl-3 Hexane, 2,4-dimethyl-3 Hexane, 2,4-dimethyl4 Pentane, 2,3,3,4-tetramethyl5 Hexane, 2 methyl128 C9H20
120 C7H16 000589-43-5 74 016747-38-9 59 5 Hexane, 2-methyl-100 C7H16 000591-76-4 53 Scan 2215 (24.032 min): 031406_14.D (-2205) (-) m/z 43.10 100.00% 5000 23.80 24.00 24.20 24.40 70 m/z 57.10 78.27% 97 114 50 77 30 10 20 30 40 50 60 70 80 90 100 110 120 #7430: Heptane, 3-methyl-Abundance 43 23.80 24.00 24.20 24.40 85 m/z 85.10 77.11% 5000 29 15 10 20 30 40 50 60 70 80 90 100 110 120 m/z--> #7438: Hexane, 2,4-dimethyl-Abundance 23.80 24.00 24.20 24.40 43 m/z 41.10 61.30% 5000 29 23.80 24.00 24.20 24.40 m/z 84.10 52.78 50 64 78 99 114 10 20 30 40 50 60 70 80 90 100 110 120 m/z--> #7447: Hexane, 2,4-dimethyl-Abundance 43 23.80 24.00 24.20 24.40 5000 50 | 99 TOmbe 021805 11 Meon Mor 400 156:260:357020606 199 T1100 110 120

```
Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\
Data File : 031406 14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
        : 25ML C141
Misc
ALS Vial : 8 Sample Multiplier: 1
Quant Method: C:\MSDCHEM\1\METHODS\T015021805.M
Ouant Title :
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e
Peak Number 11 Cyclopentane, 1-methyl-2-pr... Concentration Rank 23
                       Area
                                  Relative to ISTD
 R.T. EstConc
 ______
 27.73 8.79 ppbV 9911310 chlorobenzene-d5
                                                          26.10
Hit# of 5 Tentative ID
                                    MW MolForm CAS# Qual
1 Cyclopentane, 1-methyl-2-propyl- 126 C9H18 003728-57-2 60 2 1-Hexadecanol 242 C16H340 036653-82-4 58
 2 1-Hexadecanol
3 1-Heptanol, 6-methyl-
                                   130 C8H18O
                                                     001653-40-3 52
 4 Cyclopentane, 1,1-dimethyl- 98 C7H14
5 Cyclohexane, 1,2,4-trimethyl- 126 C9H18
                                    98 C7H14
                                                     001638-26-2 50
                                                     002234-75-5 50
            Scan 2593 (27.732 min): 031406 14.D (-2589) (-) m/z 55.10 100.00%
Abundance
            41 55 69
                   83
                        111
   5000
                                                  27.40 27.60 27.80 28.00
                                                  m/z 56.10 97.48%
           40 60 80 100 120 140 160 180 200 220
              #11247: Cyclopentane, 1-methyl-2-propyl-
Abundance
              55
                                                   27.40 27.60 27.80 28.00
                   83
                                                 m/z 57.10 94.84%
   5000
                 70
                          126
              111
          40 60 80 100 120 140 160 180 200 220
m/z-->
                   #83793: 1-Hexadecanol
Abundance
                                                  27.40 27.60 27.80 28.00
                 <sup>69</sup> 83
                                                  m/z 41.10 87.29%
   5000
          29
                          125
                                                   27.40 27.60 27.80 28.00
                                         224
       14
                                                 m/z 69.10 82.92%
        20 40 60 80 100 120 140 160 180 200 220
m/z-->
                  #13223: 1-Heptanol, 6-methyl-
Abundance
              5,5
          29
                                                   27.40 27.60 27.80 28.00
   5000
                        112 130
#15-021805.120 Mo40 Maso 28016102612402 1240061612 P7180 200 220
```

Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406 15.D

Acq On : 16 Mar 2006 1:09 pm

Operator : AF

Sample : 06-061-6 20X Misc : 25ML B241

ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

Quant Title :

TIC Library : C:\DATABASE\NISTO2.L TIC Integration Parameters: lscint.e

TITO THE WAS A						nal Standa	!
TIC Top Hit name	RT	EstConc U	nits Respo	ise ‡	# RT	Resp	Conc
Cyclohexane, methyl-	22.12	1 5.0 p	pbV 33537	00 2	19.30	6677070	10.0
tyclohexane, methyl-	22.14	6 1	pbV 68185		19.30	6677070	10.0
deptane, 2-methyl-	24.03	7.0 0	bbV 103365		26.25	14687600	10.0-
cyclohexane, 1,3	24.50	92 0-2 pi	pbV 120431	00 3	26.25	14687600	10.0-7
Cyclohexane, 1,1,	26.49		pbV 114457	00 3	26.25	14687600	10.0-
Cyclohexane, 1,3,	26.94	6 4 p	pbV 93377:	30 3	26.25	14687600	10.0
Octane, 2-methyl-	27.15	-5-6 p		50 3	26.25	14687600	10.0
Octane, 3-methyl-	27.36	3-9.2 p	pbV 135480	00 3	26.25	14687600	10.0
###thyl-4-methylc	27.88	1 - 8.3 p	obV 122702	00 3	26.25	14687600	10.σ
No nane	28.04	4-10.6 p	pbV 155438	00 3	26.25	14687600	10.0
Ethyl-4-methylc	28.38	70-8.0 p	obV 117322	00 3	26.25	14687600	10.0
Benzene, (1-methy	28.52	, 7-1- p	obV 104105	00 3	26.25	14687600	10.0-
Octane, 2,5-dimet	28.68	p) Pi	obV 72074	30 3	26.25	14687600	10.0~
1RalphaPinene	28.82	4.8 pi	obV 71242:	10 3	26.25	14687600	10.0-
Octane, 2,6-dimet	28.90	√ 11.1 pp	obV 162513	00 3	26.25	14687600	10.0-
Cyclohexane, propyl-	28.92	3-10.1 pr	bV 148062	00 3	26.25	14687600	10.0~
1RalphaPinene	29.05	50.5 pr	bV 741922	00 3	26.25	14687600	10.0-
Heptane, 3-ethyl	29.11	-6.7 pr		50 3	26.25	14687600	10.0-
Benzene, propyl-	29.23	pr 5 ب قر	obV 804996	50 3	26.25	14687600	10.0
Nonane, 3-methyl-	29.69	- 5-1 -pr	obV 742666	50 3	26.25	14687600	10.0
Decane	30.26		obV 1249220	00 3	26.25	14687600	10.0-
Ser.		0	•				

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406_15.D

Acq On : 16 Mar 2006 1:09 pm

Operator : AF

Sample : 06-061-6 20X Misc : 25ML B241

ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: lscint.e

Integrator: ChemStation

Smoothing: OFF Filtering: 5

Sampling : 1 Min Arca: 5 % of largest Peak

Start Thrs: 0.2 Max Peaks: 100 Stop Thrs: 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >

Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\T015021805.M

Title

Signal : TIC

peal #	R.T.	first	max	last scan	PI T		peak height	corr. area	corr. % max.	% of total
2 3 4 5	20.437 21.091 22.151 22.270 22.656	1834 1895 1993 2033 2062	2037	2033	VV PV VV	2 4 4	43619 206092 164398 49136 52459	6677069 18717637 13500829 2441966 3486457	7.48% 20.95% 15.11% 2.73% 3.90%	0.714% 2.002% 1.444% 0.261% 0.373%
6 7 8 9 10	22.716 23.033 23.340 23.439 23.508			2125 2149 2157	VV VV	4	50824 32166 35833 46976 374778	2303426 1867577 1862566 1462739 14184327	2.58% 2.09% 2.09% 1.64% 15.88%	0.246% 0.200% 0.199% 0.156% 1.517%
11 12 13 14	23.657 23.835 23.905 24.034 24.083			2198 2206 2219	VV VV	4	1989696 63633 50340 264603 113208	89323880 2405179 2053448 10336548 3088358	100.00% 2.69% 2.30% 11.57% 3.46%	9.552% 0.257% 0.220% 1.105% 0.330%
17 18 19 20	24.182 24.321 24.499 24.569 24.707	2236 2253 2266	2230 2244 2262 2269 2283	2253 2266 2276	VV VV	4	44927 246674 311811 164986 88198	1869011 11000840 12043087 5194067 3035087	2.09% 12.32% 13.48% 5.81% 3.40%	0.200% 1.176% 1.288% 0.555% 0.325%
21 22 23 24 25	24.806 24.856 24.985 25.086 25.212	2288 2296 2302 2315 2325		2302 2315 2325	VV	3 3	50575 45315 63037 45707 605674	1703855 1411384 2966371 1554078 17538880	1.91% 1.58% 3.32% 1.74% 19.64%	0.182% 0.151% 0.317% 0.166% 1.876%
26 27 28 29 30	25.348 25.435 25.649 25.784 25.862	2340 2352 2372 2384 2396	2347 2356 2378 2392 2400	2384 2396	VV VV PV	3 2	153582 171459 28885 48267 55271	4870985 5293941 870271 1285606 1534391	5.45% 5.93% 0.97% 1.44% 1.72%	0.521% 0.566% 0.093% 0.137% 0.164%
31 32 33 34 35	25.978 26.085 26.163 26.259 26.337	2406 2418 2425 2435 2444	2412 2423 2431 2441 2449	2425 2435 2444	VV VV		122705 15847 245388 465245 521113	3174640 459915 6900876 14687607 23015475	3.55% 0.51% 7.73% 16.44% 25.77%	0.339% 0.049% 0.738% 1.571% 2.461%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406 15.D

Acq On Acq On : 16 Mar 2006 Operator : AF 1:09 pm

Sample : 06-061-6 20X : 25ML B241 Misc

ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: lscint.e

Integrator: ChemStation

Smoothing : OFF Filtering: 5

Sampling : 1 Min Arca: 5 % of largest Peak

Start Thrs: 0.2 Max Peaks: 100 Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >

Peak separation: 5

: C:\MSDCHEM\1\METHODS\TO15021805.M Method

Title

36	26.492		2465 247			423444	11445719	12.81%	1.224%
37	26.579	2470 2	2474 247	9 VV		112597	3493938	3.91%	0.374%
38	26.657	2479 2	2482 248	37 VV	2	59526	1536727	1.72%	0.164%
39	26.744	2487 2	2491 249	3 VV	2	60396	1479954	1.66%	0.158%
40	26.851		2502 250			1786717	43644027	48.86%	4.667%
41	26.938	2507 2	2511 251	.3 VV		386188	9337731	10.45%	0.999%
42	26.977	2513 2	2515 251	.9 VV		279287	6351210	7.11%	0.679%
43	27.084	2519 2	2526 253	2 VV		1830942	59994615	67.17%	6.416%
44	27.151	2532 2	2533 254	0 VV	2	514239	11807275	13.22%	1.263%
45	27.258	2540 2	2544 254	9 VV	2	35077	1177260	1.32%	0.126%
46	27.355	2549 2	554 255	9 VV		569136	13548006	15.17%	1.449%
46 47	27.481	2559 2	567 257	1 VV	5	48416	2031510	2.27%	0.217%
48	27.597	2571 2	579 258	5 VV	4	255126	9427016	10.55%	1.008%
49	27.723	2585 2	592 259	6 VV		742619	18157613	20.33%	1.942%
50	27.791	2596 2	599 260	4 VV	5	294081	11780393	13.19%	1.260%
									1.2000
51	27.879	2604 2	608 261	.2 VV		538757	12270174	13.74%	1.312%
52	27.946	2612 2	615 261	.9 VV		304975	7000601	7.84%	0.749%
53	28.043	2619 2	625 263	0 VV	2	767610	17876710	20.01%	1.912%
54	28.111	2630 2	632 263	8 VV		68421	1509457	1.69%	0.161%
55	28.218	2638 2	643 264	7 PV	2	94000	2351966	2.63%	0.252%
							200100	2.050	0.2320
56	28.276	2647 2	649 265	1 VV		40309	741998	0.83%	0.079%
57	28.392	2651 2	661 267	0 VV	5	527514	21265060	23.81%	2.274%
58	28.528	2670 2	675 268	2 VV	2	530412	13907708	15.57%	1.487%
59	28.625	2682 2	685 268	8 VV	2	81604	1855313	2.08%	0.198%
60	28.712	2688 2	694 269	8 VV	3	584358	18760346	21.00%	2.006%
41	28.780	2698 2	701 270	2 VV		111907	2019277	2.26%	0.216%
61 62	28.819	2702 2	705 270	9 ۷۷		314600	7124208	7.98%	0.762%
63	28.906	2709 2	714 272	1 VV	3	975649	34244781	38.34%	3.662%
64	29.052	2721 2	729 273	3 VV		2997127	74192191	83.06%	7.934%
65	29.110	2733 2	735 274	1 VV	3	540923	14211234	15.91%	1.520%
66 68 69	29.226	2741 2	747 275	4 VV	4	427430	14668974	16.42%	1.569%
67	29.410	2754 2		1 VV		1493587	56854873	63.65%	6.080%
68	29.488		774 277			625565	12805371	14.34%	1.369%
69	29.536	2777 2	779 278	2 VV		545594	10296374	11.53%	1.101%
70	29.585	2782 2	784 278	7 VV		426699	9166316	10.26%	0.980%
il									
71	29.643		790 279			542854	11967770	13.40%	1.280%
72	29.692	2793 2		3 VV	2	409253	9618774	10.77%	1.029%
73	29.808	2803 2	807 281	0 PV		211038	4455403	4.99%	0.476%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\

Data File : 031406_15.D

Acq On : 16 Mar 2006 1:09 pm

Operator : AF

Sample : 06-061-6 20X Misc : 25ML B241

ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: lscint.e

Integrator: ChemStation

Smoothing: OFF Filtering: 5

Sampling : 1 Min Area: 5 % of largest Peak

Start Thrs: 0.2 Max Peaks: 100 Stop Thrs: 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent > Peak separation: 5

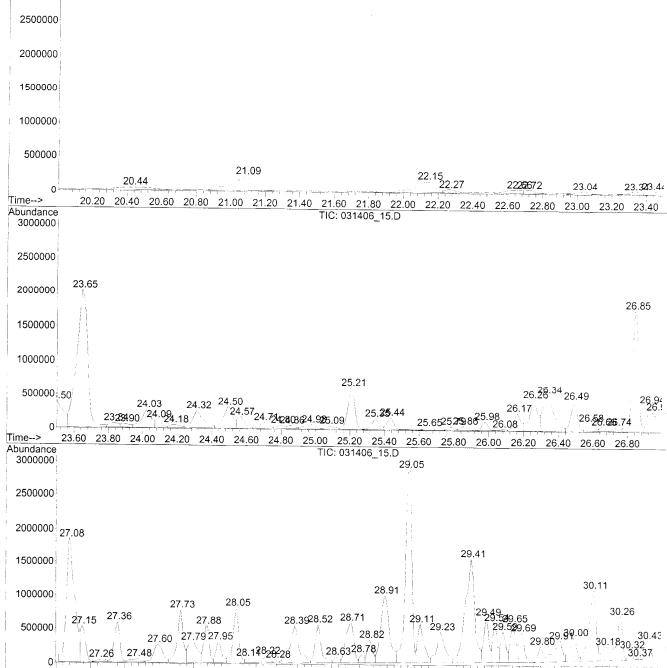
Method : C:\MSDCHEM\1\METHODS\T015021805.M

Title :

29.915 2810 2818 2821 VV 5 298174 10567157 11.83% 1.130% 30.002 2821 2827 2830 VV 4 325999 9750359 10.92% 1.043% 30.108 2830 2838 2842 VV 3 1025664 29800056 33.36% 3.187% 30.186 2842 2846 2848 VV 3 189307 5510351 6.17% 0.589% 30.264 2848 2854 2858 VV 2 626216 14914653 16.70% 1.595% 2858 2860 2863 VV 2 130462 30.322 2205277 2.47% 0.236% 30.370 2863 2865 2867 VV 18274 195664 0.22% 0.021% 30.428 2867 2871 2873 PBA3 198763 3660572 4.10% 0.391%

Sum of corrected areas: 935104335

LSC Report - Integrated Chromatogram Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\ Data File : 031406 15.D Acq On : 16 Mar 2006 1:09 pm Operator : AF Sample : 06-061-6 20X Misc : 25ML B241 ALS Vial : 9 Sample Multiplier: 1 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M Quant Title : : C:\DATABASE\NIST02.L TIC Library TIC Integration Parameters: lscint.e Abundance TIC: 031406_15.D 3000000 2500000 2000000 1500000 1000000 500000 21.09 20.44 22262672 Time--> Abundance TIC: 031406_15.D 3000000 2500000 23.65 2000000



Time--> 27.00 27.20 27.40 27.60 27.80 28.00 28.20 28.40 28.60 28.80 29.00 29.20 29.40 29.60 29.80 30.00 30.20 30.40 TO15021805.M Mon Mar 20 16:29:07 2006 RPT1 Page: 4

3550A QA/QC REPORT

Sample Information

Run Information

Sample Name: 061-6 B241 031506 15

Inject Time : 10:40:21

Inlet Position : 9

Date : 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std.: Yes

Sample Type : Sample

Cryofocus: Yes

Analysis Type : Low Level

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Sample Dryer not ready!

Pata Path : C:\MSDChem\1\DATA\2006_FER\031506\ Data File : 031406 15.D Acq On : 16 Mar 2006 1:09 pm Operator : AF Sample : 06-061-6 20X Add who peak of Misc : 25ML B241 ALS Vial : 9 Sample Multiplier: 1 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M Quant Title : TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e Peak Number 1 Cyclohexane, mcthyl-Concentration Rank 23 R.T. EstConc Area Relative to ISTD -----22.12 5.02 ppbV 3353700 1,4-difluorobenzene 19.30 Hit# of 5 Tentative ID MW MolForm CAS# Qual 1 Cyclohexane, methyl-2 Cyclohexane, methyl-3 Cyclohexane, methyl-98 C7H14 000108-87-2 93 98 C7H14 000108-87-2 90 3 Cyclohexane, methyl- 98 C7H14 14 2-Pentene, 3,4-dimethyl-, (E)- 98 C7H14 15 3-Penten-2-one, 4-methyl- 98 C6H100 000108-87-2 87 004914-92-5 59 000141-79-7 58 Abundance Scan 2022 (22.121 min): 031406_15.D (-1993) (-) m/z 83.10 100.00% 83 5000 69 21.80 22.00 22.20 22.40 m/z 55.10 83.04% 0 10 20 30 40 50 60 70 80 m/z--> 90 100 #3278: Cyclohexane, methyl-21.80 22.00 22.20 22.40 5000 m/z 98.10 53.57% 27 0 10 20 30 40 50 60 70 80 90 100 m/z--> Abundance #3280: Cyclohexane, methyl-21.80 22.00 22.20 22.40 m/z 41.10 51.40% 5000 98 27 34 62 91 21.80 22.00 22.20 22.40 m/z 56.10 29.29% 0 10 20 30 40 50 60 70 80 90 100 Abundance #3276: Cyclohexane, methyl-5000 21.80 22.00 22.20 22.40 98 TOTHE 021805. NO Moto Mars 220 1640295008 200060 RPSOI 90 100

```
Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\
  Data File : 031406 15.D
  Acq On : 16 Mar 2006
Operator : AF
                              1:09 pm
  Sample : 06-061-6 20X
  Misc
            : 25ML B241
  ALS Vial : 9 Sample Multiplier: 1
  Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
  Quant Title :
  TIC Library : C:\DATABASE\NIST02.L
                                        R.T.

Plobenzene 19.30

MW MolForm CAS# Qual

98 C7H14 000108-87-2 93
98 C7H14 000108-87-2 91
98 C7H14 000108-87-2 90
98 C5H10N2 005775-96-2 59
98 C5H10N2 028019-94-5 53

-1993) (-) m/z 83.10 100.00%

98
  TIC Integration Parameters: lscint.e
  ***********************
  Peak Number 2 Cyclohexane, methyl- Concentration Rank 5
                                       Relative to ISTD
    R.T. EstConc
                             Area
    22.14 10.21 ppbV 6818560 1,4-difluorobenzene 19.30
   Hit# of 5 Tentative ID
      ··
   1 Cyclohexane, methyl-
2 Cyclohexane, methyl-
3 Cyclohexane, methyl-
  3 Cyclohexane, methyl- 98 C7H14 000108-87-2 90 4 1H-Pyrazole, 4,5-dihydro-1,5-dim... 98 C5H10N2 005775-96-2 59 5 1H-Pyrazole, 4,5-dihydro-4,5-dim... 98 C5H10N2 028019-94-5 53
                Scan 2024 (22.141 min): 031406_15.D (-1993) (-)
  Abundance
     5000
                                                            21.80 22.00 22.20 22.40
                                                           m/z 55.10 80.74%
                                               91
            0 10 20 30 40 50 60 70 80 90 100
  Abundance
                       #3280: Cyclohexane, methyl-
                                 55
                                                            21.80 22.00 22.20 22.40
     5000
                                                           m/z 98.10 52.38%
                                                  98
                      27
                     34
                                          91
  m/z-->
            0 10 20 30 40 50 60 70 80 90 100
  Abundance
                      #3276: Cyclohexane, methyl-
                                                            21.80 22.00 22.20 22.40
                                            83
                                                           m/z 41.10 48.20%
     5000
                                                  98
                      27
                                                            21.80 22.00 22.20 22.40
          0 10 20 30 40 50 60 70 80 90 100
                                                           m/z 56.10
                      #3278: Cyclohexane, methyl-
                                 55
     5000
                                                           21.80 22.00 22.20 22.40
                                                  98
                                       70
TOME 091805 NO MO10 M20 200 164029509 6000 FOR PEDI 90 100
```

Paye: б

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406_15.D

Acq On : 16 Mar 2006 1:09 pm

Operator : AF

Sample : 06-061-6 20X Misc : 25ML B241

ALS Vial Sample Multiplier: 1 : 9

Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

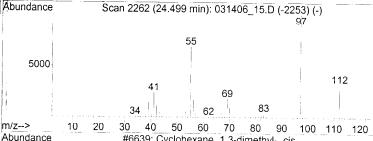
Quant Title

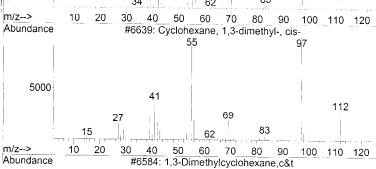
TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e

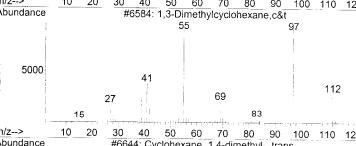
Peak Number 5 Cyclohexane, 1,3-dimethyl-,... Concentration Rank 11

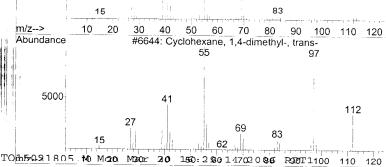
R.T.	EstConc	Area	Relative to ISTD	R.T.
24.50	8.20 ppbV	12043100	chlorobenzene-d5	26.25

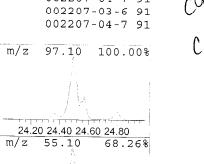
Hit# of 5 Tentative ID	ľΜ	N MolForm	CAS#	Qual
1 Cyclohexane, 1,3-dimethyl-, 2 1,3-Dimethylcyclohexane,c&t 3 Cyclohexane, 1,4-dimethyl-, 4 Cyclohexane, 1,3-dimethyl-, 5 Cyclohexane, 1,4-dimethyl-,	112 trans- 112 trans- 112	2 C8H16 2 C8H16 2 C8H16 2 C8H16 2 C8H16	000638-04-0 000591-21-9 002207-04-7 002207-03-6 002207-04-7	91 91 91
Abundance				

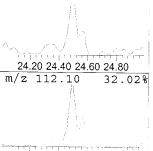


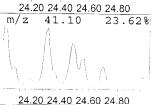


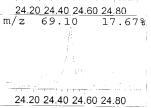












onknown are cyclohoxare

```
Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406 15.D
Acq On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc
         : 25ML B241
ALS Vial : 9 Sample Multiplier: 1
Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
Quant Title :
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e
Peak Number 10 Octane, 3 mcthyl-
                                       Concentration Rank 8
                       Area Relative to ISTD
  R.T. EstConc
                     27.36 9.22 ppbV 13548000 chlorobenzene-d5 26.25
 Hit# of 5 Tentative ID
                                    MW MolForm CAS#
1 Octane, 3-methyl-
                                 128 C9H2O 002216-33-3 70 V
128 C9H2O 002216-33-3 62
 2 Octane, 3-methyl- 128 C9H20
3 Octane, 3-methyl- 128 C9H20
4 Heptane, 2,5-dimethyl- 128 C9H20
5 Heptane, 4-(1-methylethyl)- 142 C10H22
                                                      002216-33-3 58
                                                      002216-30-0 55
                                                      052896-87-4 53
Abundance
           Scan 2555 (27.365 min): 031406_15.D (-2549) (-)
                                                 m/z 57.10 100.00%
   5000
                                                 27.00 27.20 27.40 27.60
                                98
                                                  m/z 41.10 32.12%
                 50 67 82 110 128
      10 20 30 40 50 60 70 80 90 100 110 120 130
Abundance
          #12258: Octane, 3-methyl-
                     57
                                                   27.00 27.20 27.40 27.60
                                                  m/z 43.10 22.91%
   5000
        29 71 98
15 50 71 85 113 128
      10 20 30 40 50 60 70 80 90 100 110 120 130
Abundance
                   #12266: Octane, 3-methyl-
                                                   27.00 27.20 27.40 27.60
                                                  m/z 98.10 21.17%
   5000
                 43
            29
                       71 50
7 84 113 128
                                                 27.00 27.20 27.40 27.60
                                                 m/z 56.10 21.05%
      <u>10 20 30 40 50 60 70 80 90 100 110 120 130</u>
Abundance
                  #12267: Octane, 3-methyl-
                     57
   5000
                                                27.00 27.20 27.40 27.60
                        71 78 85 98 11 113 128
                  50
```

Omb 502180510M 200n30Ma to 25016602970178020006 R00T110 120 130

```
Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
 Data File : 031406 15.D
        : 16 Mar 2006
                        1:09 pm
 Operator : AF
 Sample : 06-061-6 20X
 Misc
          : 25ML B241
 ALS Vial : 9 Sample Multiplier: 1
 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
 Quant Title :
 TIC Library : C:\DATABASE\NIST02.L
 TIC Integration Parameters: lscint.e
 Peak Number 11 1-Ethyl-4-methylcyclohexane Concentration Rank 10
   R.T. EstConc
                        Area
                                   Relative to ISTD
                     _______
  27.88 8.35 ppbV 12270200 chlorobenzene-d5
  Hit# of 5 Tentative ID
                                     MW MolForm CAS# Qual
     1 1-Ethyl-4-methylcyclohexane 126 C9H18 003728-56-1 86 2 4-Octen-3-one 126 C8H140 014129-48-7 72
  2 4-Octen-3-one
                                    126 C9H18
                                                       059643-68-4 72
  4 Furan, 2,3-dihydro-4-(1-methylpr... 126 C8H140
                                                       034379-54-9 72
  5 2-Hexene, 3,4,4-trimethyl- 126 C9H18
                                                       053941-19-8 72
            Scan 2608 (27.879 min): 031406_15.D (-2604) (-) m/z 97.10 100.00%
                     55
    5000
                                                    27.60 27.80 28.00 28.20
                                           126
                                                m/z 55.10 52.50%
                          69 81
                                      111
       10 20 30 40 50 60 70 80 90 100 110 120 130
 Abundance
                #11214: 1-Ethyl-4-methylcyclohexane
                     55
                                                     27.60 27.80 28.00 28.20
    5000
                                                   m/z 126.20 19.86%
                        69
                                          126
                         81 90 104111118
            34 | 48 | 62
       10 20 30 40 50 60 70 80 90 100 110 120 130
 m/z-->
 Abundance
                    #10967: 4-Octen-3-one
                                                     27.60 27.80 28.00 28.20
                                                   m/z 41.10 14.85%
                     55
    5000
                                          126
                                                     27.60 27.80 28.00 28.20
                             83
                                 111
                                                             12.09%
       10 20 30 40 50 60 70 80 90 100 110 120 130
 m/z-->
                 #11185: 3,5-Dimethyl-3-heptene
                     55
    5000
                                                   27.60 27.80 28.00 28.20
                                          126
Oh 502180510M 200n30Mart0 2501602970188020906 100T110 120 130
```

Norman J

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406_15.D

Acq On : 16 Mar 2006 1:09 pm

```
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1
Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
Quant Title :
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e
 ***********************
Peak Number 12 Nonane
                                            Concentration Rank 4
                       Area Relative to ISTD
  R.T. EstConc
  ______
 28.04 10.58 ppbV 15543800 chlorobenzene-d5
                                                         26.25
 Hit# of 5 Tentative ID
                                    MW MolForm CAS#
 .....
 1 Nonane
                                   128 C9H20 000111-84-2 91
128 C9H20 000111-84-2 91
 2 Nonane
 3 Nonane
                                   128 C9H20
                                                    000111-84-2 91
 4 Hexane, 2,4-dimethyl-
5 Undecane, 2,4-dimethyl-
                                   114 C8H18
                                                    000589-43-5 50
                                   184 C13H28
                                                    017312-80-0 50
            Scan 2625 (28.043 min): 031406_15.D (-2619) (-)
                                            m/z 57.10 100.00%
                43 57
   5000
                             85
                                                  27.80 28.00 28.20 28.40
                                               m/z 43.10 82.99%
                                         128
m/z--> 10 20 30 40 50 60 70 80 90 100 110 120 130
Abundance
                     #12251: Nonane
                                                   27.80 28.00 28.20 28.40
   5000
                                                 m/z 41.10 51.20%
      10 20 30 40 50 60 70 80 90 100 110 120 130
m/z-->
Abundance
                     #12252: Nonane
                                                   27.80 28.00 28.20 28.40
                                                 m/z 85.10 46.44%
                    57
   5000
            29
                        71 85
                    99 113 128
                                                 27.80 28.00 28 20 28.40
                                                m/z 71.10 29.88%
      10 20 30 40 50 60 70 80 90 100 110 120 130
m/z-->
Abundance
                     #12253: Nonane
                43
   5000
                                                27.80 28.00 28.20 28.40
                       H
h 150 9 1 8 0 510 M 200 n 30 Ma 20 2 60 1 60 2 9 0 1 90 0 2 0 0 0 10 P T 11 0 120 130
```

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Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

```
Data File : 031406 15.D
Acq On
       : 16 Mar 2006
                        1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc
         : 25ML B241
ALS Vial : 9 Sample Multiplier: 1
Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
Quant Title :
TIC Library : C:\DATABASE\NISTO2.L
TIC Integration Parameters: lscint.e
*****************************
Peak Number 13 1-Ethyl 4 methylcyclohexane Concentration Rank 13
        EstConc
                                 Relative to ISTD
                        Area
                      28.38 7.99 ppbV 11732200 chlorobenzene-d5
                                                                         und Catheth
 Hit# of 5 Tentative ID
                                     MW MolForm CAS#
                                                                  Qual
               -----
 1 1-Ethyl-4-methylcyclohexane 126 C9H18 003728-56-1 81 2 3,5-Dimethyl-3-heptene 126 C9H18 059643-68-4 70
 2 3,5-Dimethyl-3-heptene
 3 3,5-Dimethyl-3-heptene 126 C9H18 4 Cyclohexane, 1-ethyl-4-methyl-, ... 126 C9H18
                                                       059643-68-4 64
                                                       006236-88-0 64
 5 Cyclohexane, 1-ethyl-4-methyl-, ... 126 C9H18
                                                        004926-78-7 64
Abundance
             Scan 2660 (28.383 min): 031406_15.D (-2651) (-)
                                                  m/z 97.10 100.00%
                 55
   5000
                    69
                                                    28.00 28.20 28.40 28.60
                                                    m/z 55.10 66.62%
                                    140
                           100 120 140 160 180
                  60 80
Abundance
                #11214: 1-Ethyl-4-methylcyclohexane
                 55
                                                    28.00 28.20 28.40 28.60
   5000
                                                   m/z 69.10
                                 126
                  60 80 100 120 140 160
              40
m/z-->
                                             180
Abundance
                  #11184: 3,5-Dimethyl-3-heptene
                                                    28.00 28.20 28.40 28.60
                                                   m/z 41.10 30.67%
   5000
                                 126
           29
                                                  28.00 28.20 28.40 28.60
        15
                                                  m/z 125.10
                          100 120 140 160 180
m/z-->
        20 40
                  60 80
                 #11182: 3,5-Dimethyl-3-heptene
Abundance
   5000
                                                  28.00 28.20 28.40 28.60
                    69
                                 126
hts 091805 M20Mon 4 Mar 800 168029: 100 20120 RP 170 160 180
                                                                                Page: 15
```

```
Data Path : C:\MSDChem\1\DATA\2006_FFR\031506\
  Data File : 031406 15.D
  Acq On : 16 Mar 2006 1:09 pm
  Operator : AF
  Sample : 06-061-6 20X
           : 25ML B241
  ALS Vial : 9 Sample Multiplier: 1
  Quant Method: C:\MSDCHEM\1\METHODS\T015021805.M
  Quant Title :
  TIC Library : C:\DATABASE\NIST02.L
  TIC Integration Parameters: lscint.e
  Peak Number 18 Octane, 2,6 dimethyl-
                                                 Concentration Rank 3
                           Area Relative to ISTD
    R.T. EstConc
                         -----
   28.90 11.06 ppbV 16251300 chlorobenzene-d5
                                                                26.25
  Hit# of 5 Tentative ID
                                 MW MolForm CAS#
                                                                      Qual
  1 Octane, 2,6-dimethyl- 142 C10H22 002051-30-1 89
2 Octane, 2,6-dimethyl- 142 C10H22 002051-30-1 76
  2 Octane, 2,6-dimethyl-
3 Octane, 3,6-dimethyl-
4 Nonane, 3-methyl-
5 Nonane, 3-methyl-
                                        142 C10H22
                                                          015869-94-0 64
                                         142 C10H22
                                                          005911-04-6 62
                                         142 C10H22
                                                            005911-04-6 58
               Scan 2713 (28.897 min): 031406_15.D (-2709) (-)
                                                     m/z 57.10 100.00%
                   43
     5000
                                 113
97
                                                        28.60 28.80 29.00 29.20
                                                       m/z 71.10 73.06%
                                      126 <sub>142</sub>
         10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
                 #18460: Octane, 2,6-dimethyl-
                                                         28.60 28.80 29.00 29.20
                                                       m/z 43.10
     5000
             85 97 127 142
         10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
  m/z-->
  Abundance
                     #18455: Octane, 2,6-dimethyl-
                                                         28.60 28.80 29.00 29.20
                                                       m/z 41.10
                                                                    56.07%
                  43
     5000
              29
                                      113
                                                       28.60 28.80 29.00 29.20
                                   99 127 142
                                                       m/z 56.10
        10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
 Abundance
                    #18461: Octane, 3,6-dimethyl-
     5000
                                                         28.60 28.80 29.00 29.20
                                      113
TOME 02 180 5 0 M 2 M 0 30 M AO 500 606 709 807 90 0 000 R10 T120 130 140 150
```

```
Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406 15.D
Acq On
        : 16 Mar 2006 1:09 pm
Operator : AF
Sample
        : 06-061-6 20X
Misc
         : 25ML B241
ALS Vial : 9 Sample Multiplier: 1
Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
Quant Title :
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e
Peak Number 19 Cyclohexane, propyl-
                                      Concentration Rank 6
                                Relative to ISTD
  R.T. EstConc
                    28.92 10.08 ppbV 14806200 chlorobenzene-d5
 Hit# of 5 Tentative ID MW MolForm CAS# (
Hit# of 5 Tentative ID
 1 Cyclohexane, propyl- 126 C9H18 001678-92-8 76
 2 Cyclohexane, propyl-
                                   126 C9H18
                                                      001678-92-8 76
 3 Cyclohexane, propyl-
                                   126 C9H18
                                                      001678-92-8 70
 4 Cyclohexane, propyl-
                                    126 C9H18
                                                      001678-92-8 68
 5 Cyclohexane, propyl-
                                     126 C9H18
                                                      001678-92-8 64
          Scan 2715 (28.916 min): 031406_15.D (-2709) (-)
                                             m/z 83.10 100.00%
                           83
                   55
   5000
                                      126
                                                  28.60 28.80 29.00 29.20
                                113
                  63 | 113
                                                  m/z 55.10 80.12%
      10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
Abundance
                  #11175: Cyclohexane, propyl-
                   55
                          83
                                                   28.60 28.80 29.00 29.20
   5000
                                                 m/z 82.10 52.85%
               41
                      67
                                      126
              75 97 108
      10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
m/z \rightarrow
Abundance
                 #11177: Cyclohexane, propyl-
                                                   28.60 28.80 29.00 29.20
                                                  m/z 41.10 42.27%
   5000
               41
        15
                                      126
                                                   28.60 28.80 29.00 29.20
      15 97
10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
                                                  m/z 57.10
Abundance
                  #11176: Cyclohexane, propyl-
                   55
   5000
                                                   28.60 28.80 29.00 29.20
                                      126
                              97 109
                       75
```

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```
Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\
Data File : 031406 15.D
Acq On : 16 Mar 2006
Operator : AF
                       1:09 pm
Sample : 06-061-6 20X
         : 25ML B241
Misc
ALS Vial : 9 Sample Multiplier: 1
Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
Ouant Title :
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e
*************************
Peak Number 20 1R-.alpha.-Pinene
                                         Concentration Rank 1
                        Area Relative to ISTD
  R.T. EstConc
 29.05 50.51 ppbV 74192200 chlorobenzene-d5
Hit# of 5 Tentative ID MW MolForm CAS# (
                                                                Qual
 1 1R-.alpha.-Pinene
2 1R-.alpha.-Pinene
                                  136 C10H16 007785-70-8 97
136 C10H16 007785-70-8 95
 3 Tricyclo[2.2.1.0(2,6)]heptane, 1... 136 C10H16
                                                       000488-97-1 94
 4 .alpha.-Pinene 136 C10H16 5 Bicyclo[3.1.1]hept-2-ene, 2,6,6-... 136 C10H16
                                                       000080-56-8 94
                                                        002437-95-8 94
           Scan 2729 (29.052 min): 031406_15.D (-2721) (-)
Abundance
                                                 m/z 93.10 100.00%
   5000
                                                    28.80 29.00 29.20 29.40
              39 53 67 105 121
113
                                                  m/z 91.10 48.65%
       10 20 30 40 50 60 70 80 90 100 110 120 130 140
                  #15163: 1R-.alpha.-Pinene
                                                     28.80 29.00 29.20 29.40
                                                   m/z 92.05 38.10%
   5000
                41
                   53 <sub>67</sub>
                                105 121 <sub>136</sub>
                 10 20 30 40 50 60 70 80 90 100 110 120 130 140
                                                  28.80 29.00 29.20 29.40
                  #15161: 1R-.alpha.-Pinene
Abundance
                                                   m/z 77.05 31.16%
   5000
       15 27
                  53 67
                                                   28.80 29.00 29.20 29.40
                                         136
                                                   m/z 79.10
                                         ----
       10 20 30 40 50 60 70 80 90 100 110 120 130 140 #15331: Tricyclo[2.2.1.0(2,6)]heptane, 1,3,3-trimethyl-
Abundance
                               93
                                                  28.80 29.00 29.20 29.40
   5000
16-2-2180510M 200000Mato 250 166:200:200 900000 RP0F120 130 140
```

```
Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
  Data File : 031406 15.D
  Acq On : 16 Mar 2006 1:09 pm
  Operator : AF
  Sample : 06-061-6 20X
  Misc : 25ML B241
  ALS Vial : 9 Sample Multiplier: 1
  Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
  Quant Title :
  TIC Library : C:\DATABASE\NIST02.L
  TIC Integration Parameters: lscint.e
  **********************
  Peak Number 25 Decane
                                             Concentration Rank 9
                     Area Relative to ISTD
   R.T. EstConc
          30.26 8.51 ppbV 12492200 chlorobenzene-d5
  Hit# of 5 Tentative ID
                                     MW MolForm CAS#
                                                                Qual
               1 Decane
                                     142 C10H22 000124-18-5 95
   2 Tetradecane
                                     198 C14H30
                                                     000629-59-4 86
   3 Hexadecane
                                     226 C16H34
                                                     000544-76-3 86
   4 Tridecane
                                     184 C13H28
                                                     000629-50-5 78
  5 Pentadecane
                                     212 C15H32
                                                      000629-62-9 78
             Scan 2854 (30.264 min): 031406_15.D (-2848) (-)
                                              m/z 57.10 100.00%
             43 57
     5000
                    85
                                                    30.00 30.20 30.40 30.60
                                                  m/z 43.10 84.97%
                       99 113 127 142
             40 60 80 100 120 140 160 180 200 220
  Abundance
                       #18418: Decane
             43
                57
                                                    30.00 30.20 30.40 30.60
     5000
                                                  m/z 71.10
                                                              50.60%
                     99 113 126 142
 m/z-->
         20 40 60 80 100 120 140 160 180 200 220
 Abundance
                     #55008: Tetradecane
                                                    30.00 30.20 30.40 30.60
                57
                                                  m/z 85.10 41.70%
             43
                  85
    5000
           29
                      99 113 127 141 155 169
                                                   30.00 30.20 30.40 30.60
                                      198
                                                  m/z 41.10
         20 40 60 80 100 120 140 160 180 200 220
 m/z-->
 Abundance
                     #73967: Hexadecane
               57
             43
                  71
    5000
                                                    30.00 30.20 30.40 30.60
                    85
                      99
113 127 141 155 169 183 197
TOMB-02 1805 DO Marin Maser 280 16002 91:201 1200 660R P180 200 220
```

Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\ Data File : 031406 15.D Acq On : 16 Mar 2006 1:09 pm Operator : AF Sample : 06-061-6 20X : 25ML B241 Misc ALS Vial : 9 Sample Multiplier: 1 Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M Ouant Title : TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e Peak Number 4 Heptane, 2-methyl-Concentration Rank 16 Area Relative to ISTD R.T. EstConc _____ 24.03 7.04 ppbV 10336500 chlorobenzene-d5 26.25 Hit# of 5 Tentative ID MW MolForm CAS# 000592-27/8 95 1 Heptane, 2-methyl-114 C8H18 000592-**2**7-8 91 00059**2**-27-8 91 2 Heptane, 2-methyl-114 C8H18 3 Heptane, 2-methyl-114 C8H18 4 Hexane, 2,5-dimethyl-114 C8H18 000592-13-2 58 000592-13-2 43 5 Hexane, 2,5-dimethyl-114 C8H18 Scan 2215 (24.034 min): 031406_15.D (-2206) (-) m/z/ 57.10 100.00% 43 57 5000 70 23.80 24.00 24.20 24.40 m/z 43.10 88.04% 77 85 50 📖 10 20 30 40 50 60 70 80 90 100 #7437: Heptane, 2-methyl-Abundance 43 23.80 24.00 24.20 24.40 m/z 41.10 46.378 5000 29 50 36 10 20 30 40 50 60 70 80 90 100 110 120 m/z--> Abundance #7429: Heptane, 2-methyl-23.80 24.00 24.20 24.40 m/z 42.10 38.18% 5000 29 23.80 24.00 24.20 24.40 50 114 m/z 70.10 10 20 30 40 50 60 70 80 90 100 110 120 m/z--> #7432: Heptane, 2-methyl-Abundance 43 23.80 24.00 24.20 24.40 5000 29 50 TO AN ECO 2 1805 . NO Mozon Mosor 200 150: 200: 17020000 190 T100 110 120

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Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\

Data File : 031406 15.D

Acq On : 16 Mar 2006 1:09 pm

Operator : AF

Sample : 06-061-6 20X Misc : 25ML B241

ALS Vial : 9 Sample Multiplier: 1

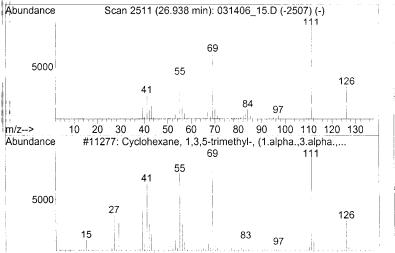
Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

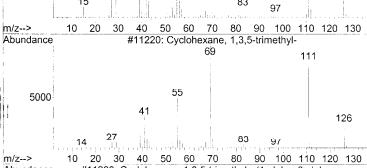
Quant Title :

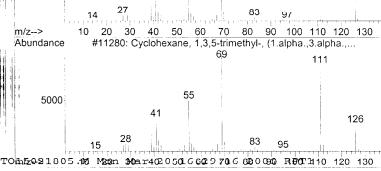
TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e

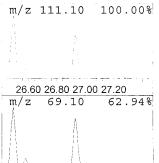
R.T.	EstConc	Area	Relative to ISTD	R.T.
26.94	6.36 ppbV	9337730	chlorobenzene-d5	26.25

нт	TH OT 5	Tentative ID		1vIW	MOTFORM	CAS#	Quai
1	Cyclohexane	, 1,3,5-trimethyl-,	(126	C9H18	001795-26-	- 2 91
2	Cyclohexane	, 1,3,5-trimethyl-		126	C9H18	001839-63-	0 83
3	Cyclohexane	, 1,3,5-trimethyl-,	(126	C9H18	001795-27-	3 80
4	Cyclohexane	, 1,3,5-trimethyl-,	(126	C9H18	001795-26-	2 70
5	Cyclohexane	, 1,3,5-trimethvl-,	(126	C9H18	001795-27-	3 64

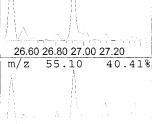


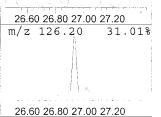


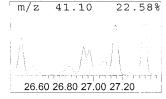




Me Cored







```
Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\
  Data File : 031406 15.D
 Acq On : 16 Mar 2006 1:09 pm Operator : AF
 Sample : 06-061-6 20X
Misc : 25ML B241
  ALS Vial : 9 Sample Multiplier: 1
  Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
  Quant Title :
  TIC Library : C:\DATABASE\NIST02.L
 TIC Integration Parameters: lscint.e
  Peak Number 9 Octane, 2-methyl-
                                              Concentration Rank 19
                         Area Relative to ISTD
   R.T. EstConc
         _____
  27.15 5.56 ppbV 8161160 chlorobenzene-d5
                                                            26.25
                                      MW MolForm CAS# Qual
  Hit# of 5 Tentative ID
  128 C9H20 003221-61-2 74
128 C9H20 001072-05-5 58
156 C11H24 017302-23-7 53
  1 Octane, 2-methyl-
  2 Heptane, 2,6-dimethyl-
3 Nonane, 4,5-dimethyl-
  4 Octane, 2-methyl-
5 Decane, 2-methyl-
                                      128 C9H2O
                                                       003221-61-2 52
                                      156 C11H24
                                                        006975-98-0 50
              Scan 2533 (27.151 min): 031406_15.D (-2532) (-)
                                                   m/z 43.10 100.00%
                 57 71
     5000
                                                   26.80 27.00 27.20 27.40
                      99 113 128
                                                  m/z 71.10 47.66%
 m/z--> 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160
 Abundance
                 #12260: Octane, 2-methyl-
                                                    26.80 27.00 27.20 27.40
    5000
                                                    m/z 57.10 43.81%
                         85
               99 113 128
        20 30 40 50 60 70 80 90 100 110 120 130 140 150 160
 m/z-->
  Abundance
                   #12270: Heptane, 2,6-dimethyl-
                                                    26.80 27.00 27.20 27.40
                                                    m/z 42.10 26.86%
     5000
                     71
                    85
                                                    26.80 27.00 27.20 27.40
        20 30 40 50 60 70 80 90 100 110 120 130 140 150 160
                                                   m/z 85.10 19.85%
                   #27134: Nonane, 4,5-dimethyl-
 Abundance
              #3
43 5.7
     5000
                                                   26.80 27.00 27.20 27.40
TO the 0 2 1 8 0 520M 30 0 40 M 50 600 706 80 9 90 7 100 0 0 0 6 120 7 130 140 150 160
```

Data Path : C:\MSDChem\1\DATA\2006_FED\031506\

Data File : 031406 15.D

```
Acg On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1
Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
Ouant Title :
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e
******************
Peak Number 14 Benzene, (1-methylethyl) - Concentration Rank 15
                           Area Relative to ISTD
  R.T. EstConc
 ______
 28.52 7.09 ppbV 10410500 chlorobenzene-d5
                                                                26.25
                                        MW MolForm CAS# Qual
 Hit# of 5 Tentative ID
_____
1 Benzene, (1-methylethyl) - 120 C9H12 000098-82-8 80 2 Undecane, 2,7-dimethyl 184 C13H28 017301-24-5 47 3 Benzene, (1-methylethyl) - 120 C9H12 000098-82-8 42 4 Benzene, (1-methylethyl) 120 C9H12 000098-82-8 42 5 Hexane, 2,4-dimethyl 114 C8H18 000589-43-5 38
                                        114 C8H18
                                                            000589-43-5 38
 5 Hexane, 2,4-dimethyl-
              Scan 2674 (28.518 min): 031406_15.D (-2670) (-)
                                                      m/z 105.10 100.00%
Abundance
                  57
               43
    5000
                                   120
                                                        28.20 28.40 28.60 28.80
                                                        m/z 57.10 79.44%
                      142
      20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170
m/z-->
         #9119: Benzene, (1-methylethyl)-
Abundance
                               105
                                                         28.20 28.40 28.60 28.80
                                                      m/z 43.10
    5000
                                   120
         20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170
                                                        28.20 28.40 28.60 28.80
Abundance
                   #45571: Undecane, 2,7-dimethyl-
                                                        m/z 85.10
                                                                    35.47%
    5000
                            98 111 127 141 169
                                                          28.20 28.40 28.60 28.80
                                                       m/z 41.10
         20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170
 bundance
                   #9117: Benzene, (1-methylethyl)-
                                                         28.20 28.40 28.60 28.80
                                   120
           27 39 51
                        ججانان
          بصابح عيتران ووبادهم
10 170 21805 20 300 140 M50 60 070 602 90 300 210 0 20 R30 1140 150 160 170
```

```
Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\
Data File : 031406 15.D
Acq On : 16 Mar 2006 1:09 pm Operator : AF
Sample : 06-061-6 20X
          : 25ML B241
Misc
ALS Vial : 9 Sample Multiplier: 1
Quant Method: C:\MSDCHEM\1\METHODS\T015021805.M
Ouant Title :
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e
*******************
Peak Number 15 Octane, 2,5-dimethyl-
                                               Concentration Rank 24
R.T. EstConc Area Relative to ISTD
 28.68 4.91 ppbV 7207480 chlorobenzene-d5
                                                               26.25
Hit# of 5 Tentative ID MW MolForm CAS# Qual
 1 Octane, 2,5-dimethyl- 142 C10H22 015869-89-3 76 2 Octane, 2,5-dimethyl- 142 C10H22 015869-89-3 58
 3 Decane, 2,5,9-trimethyl-
4 1-Decanol, 2-ethyl-
186 C12H260
                                                          062108-22-9 53
                                      186 C12H26O
                                                          021078-65-9 50
 5 Pentane, 2,2,3,3-tetramethyl- 128 C9H2O
                                                          007154-79-2 50
             Scan 2691 (28.683 min): 031406_15.D (-2688) (-)
                                                     m/z 57.10 100.00%
   5000
                          71
                                                        28.40 28.60 28.80 29.00
                            91
                                                      m/z 43.10 77.27%
                                     113 126 142
m/z--> 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Abundance #18442: Octane 2 5-dimethyl-
         #18442: Octane, 2,5-dimethyl-
                      57
                                                        28.40 28.60 28.80 29.00
                                                      m/z 41.10 48.94%
   5000
                          71
             29
                                113 127 142
         15
        10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
Abundance
                   #18456: Octane, 2,5-dimethyl-
                                                        28.40 28.60 28.80 29.00
                                                      m/z 71.10
   5000
                                                       28.40 28.60 28.80 29.00
                                     113 127 142
                             85
                                                      m/z 70.10
       10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
m/z-->
                  #45601: Decane, 2,5,9-trimethyl-
Abundance
                      57
   5000
                  43
                                                        28.40 28.60 28.80 29.00
                          71
                             85
15-021805 101 Don30Ma40 250 166:200:200 900 0000 RIPT120 130 140 150
```

```
Data Path : C:\MSDChcm\1\DATA\2006_FEB\031506\
Data File : 031406_15.D
Acq On : 16 Mar 2006
                        1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc
         : 25ML B241
ALS Vial : 9 Sample Multiplier: 1
Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
Quant Title :
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e
**********************
Peak Number 17 1R-.alpha.-Pinene
                                             Concentration Rank 25
 R.T. EstConc
                        Area Relative to ISTD
 28.82 4.85 ppbV 7124210 chlorobenzene-d5
Hit# of 5 Tentative ID
                                     MW MolForm CAS#
1 1R-.alpha.-Pinene
                                   136 C10H16 007785-70-8 97
.. 136 C10H16 000498-15-7 94
 2 Bicyclo[4.1.0]hept-3-ene, 3,7,7-... 136 C10H16
 3 Tricyclo[2.2.1.0(2,6)]heptane, 1... 136 C10H16
                                                      000508-32-7 94
 4 1S-Lalpha.-Pinene
                                     136 C10H16
                                                       007785-26-4 94
 5 3-Carene
                                     136 C10H16
                                                       013466-78-9 91
            Scan 2705 (28.819 min): 031406_15.D (-2702) (-)
                                                m/z 93.10 100.00%
Abundance
   5000
                                     121 136
                                                  28.60 28.80 29.00 29.20
                   55 69
                                      m/z 91.10 33.76%
                              113
                   ے ،''ب<sup>ا</sup>لہ باللہ النہ ہے۔
       10 20 30 40 50 60 70 80 90 100 110 120 130 140
Abundance
                  #15161: 1R-.alpha.-Pinene
                                                    28.60 28.80 29.00 29.20
                                                   m/z 92.10 24.45%
   5000
               10 20 30 40 50 60 70 80 90 100 110 120 130 140
Abundance
         #15344: Bicyclo[4.1.0]hept-3-ene, 3,7,7-trimethyl-, (1S)-
                                                     28.60 28.80 29.00 29.20
                                                   m/z 121.10 24.35%
   5000
                                     121 136
                                 105
                                                      28.60 28.80 29.00 29.20
                                                   m/z 136.10 21.57%
      10 20 30 40 50 60 70 80 90 100 110 120 130 140
m/z-->
           #15321: Tricyclo[2.2.1.0(2,6)]heptane, 1,7,7-trimethyl-
Abundance
   5000
                                                      28.60 28.80 29.00 29.20
```

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406 15.D

Acq On : 16 Mar 2006 1:09 pm Operator : AF Sample : 06-061-6 20X Misc : 25ML B241 ALS Vial : 9 Sample Multiplier: 1 Quant Method: C:\MSDCHEM\1\METHODS\T015021805.M Quant Title : TIC Library : C:\DATABASE\NIST02.L TIC Integration Parameters: lscint.e ********************* Peak Number 21 Heptane, 3-ethyl-2-methyl- Concentration Rank 17 R.T. EstConc Area Relative to ISTD 29.11 6.70 ppbV 9845750 chlorobenzene-d5 26.25 Hit# of 5 Tentative ID MW MolForm CAS# Qual ------1 Heptane, 3-ethyl-2-methyl- 142 C10H22 014676-29-0 72 2 Heptane, 3-ethyl-2-methyl- 142 C10H22 014676-29-0 64 3 Heptane, 4-propyl-142 C10H22 003178-29-8 64 142 C10H22 4 Heptane, 3-ethyl-2-methyl-014676-29-0 53 5 Octane, 2,3-dimethyl-142 C10H22 007146-60-3 50 Abundance Scan 2735 (29.110 min): 031406_15.D (-2733) (-) m/z 57.10 100.00% 1 98 5000 43 28.80 29.00 29.20 29.40 71 ₈₅ m/z 98.10 113₁₂₁ m/z--> 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 #18483: Heptane, 3-ethyl-2-methyl-28.80 29.00 29.20 29.40 m/z 43.10 33.82% 5000 43 98 71 ₈₅ 85 113 142 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 Abundance #18480: Heptane, 3-ethyl-2-methyl-28.80 29.00 29.20 29.40 m/z 41.10 30.43% 5000 29 28.80 29.00 29.20 29.40 113 142 m/z 56.10 19.57% 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 #18438: Heptane, 4-propyl-Abundance 28.80 29.00 29.20 29.40 112 126

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\

```
Data File : 031406 15.D
Acq On
       : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
      : 25ML B241
ALS Vial : 9 Sample Multiplier: 1
Quant Method: C:\MSDCHEM\1\METHODS\T015021805.M
Quant Title :
TIC Library : C:\DATABASE\NISTO2.L
TIC Integration Parameters: lscint.e
*************************
Peak Number 22 Benzene, propyl-
                                            Concentration Rank 20
                      Area Relative to ISTD
 R.T. EstConc
                   -----
 29.23 5.48 ppbV 8049960 chlorobenzene-d5 26.25
 Hit# of 5 Tentative ID
                                   MW MolForm CAS# Qual
 1 Benzene, propyl-
                                   120 C9H12 000103-65-1 42
 2 Benzene, propyl-
                                   120 C9H12
                                                    000103-65-1 38
120 C9H12
14 Propanenitrile, 3-[(phenylmethyl... 160 C10H12N2
15 1-Benzylamino-2-benzyloxyethana
                                                    000103-65-1 35
                                                000706-03-6 22
5 1-Benzylamino-2-benzyloxyethane 241 C16H19N0
                                                     038336-06-0 16
           Scan 2747 (29.226 min): 031406_15.D (-2741) (-)
                                                m/z 91.10 100.00%
   5000
                                    120
                                                    29.00 29.20 29.40 29.60
               41 55
               55 109 138
                                                 m/z 120.10 28.19%
      10 20 30 40 50 60 70 80 90 100 110 120 130 140
Abundance
                #9109: Benzene, propyl-
                                                    29.00 29.20 29.40 29.60
                                                 m/z 95.10 24.45%
   5000
                                    120
          27 39 51 65 78
m/z-->
     <u>10 20 30 40 50 60 70 80 90 100 110 120 130 140</u>
Abundance
                 #9107: Benzene, propyl-
                                                    29.00 29.20 29.40 29.60
                                                 m/z 125.10 23.87%
   5000
                                    120
      15 27 39 51 65 78
                                                    29.00 29.20 29.40 29.60
                               105
                                                 m/z 69.10 19.95%
      10 20 30 40 50 60 70 80 90 100 110 120 130 140
Abundance
                   #9108: Benzene, propyl-
   5000
                                                    29.00 29.20 29.40 29.60
                                    120
ALEO 9 180 510 M 2010 130 M 40 200 606 : 709 : 809 900 0 600 R 120 120 130 140
```

Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\

```
Data File : 031406 15.D
  Acq On : 16 Mar 2006
                            1:09 pm
  Operator : AF
  Sample : 06-061-6 20X
         : 25ML B241
  ALS Vial : 9 Sample Multiplier: 1
  Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M
  Quant Title :
  TIC Library : C:\DATABASE\NIST02.L
  TIC Integration Parameters: lscint.e
  Peak Number 24 Nonane, 3-mcthyl
                                                 Concentration Rank 22
                       Area Relative to ISTD
   R.T. EstConc
                          29.69 5.06 ppbV 7426660 chlorobenzene-d5
                                                                26.25
   Hit# of 5 Tentative ID
                                MW MolForm CAS# Qual
                   1 Nonane, 3-methyl-
                                       142 C10H22 005911-04-6 91
   2 Nonane, 3-methyl-
                                        142 C10H22
                                                           005911-04-6 78
  3 Tridecane, 7-methyl-
4 Octane, 1,1'-oxybis-
5 Octane, 3,6-dimethyl-
                                        198 C14H30
                                                           026730-14-3 78
                                       242 C16H34O
                                                          000629-82-3 74
                                        142 C10H22
                                                           015869-94-0 72
  Abundance
               Scan 2795 (29.692 min): 031406_15.D (-2793) (-)
                                                       m/z 57.10 100.00%
     5000
               43
                                                         29.40 29.60 29.80 30.00
                            112
                                                       m/z 71.10 75.84%
                        85 99 123 142
                      80 100 120 140 160 180 200
 m/z-->
 Abundance
                     #18432: Nonane, 3-methyl-
                                                         29.40 29.60 29.8<u>0 30.00</u>
               43
                     71
                                                       m/z 43.10 38.30%
     5000
            29
                       85 98 <sup>112</sup> 127 142
                    0 80 100 120 140 160 180 200
 m/z-->
         20 40 60
  Abundance
                     #18429: Nonane, 3-methyl-
                                                         29.40 29.60 29.80 30.00
                                                       m/z 56.10 33.68%
               43
     5000
            29
                       85 98 1 127 142
                                                         29.40 29.60 29.80 30.00
         15
                                                       m/z
                                                            41.10 29.73%
         20 40 60 80 100 120 140 160 180 200
#55019: Tridecane, 7-methyl-
 m/z-->
 Abundance
               43
     5000
                                                      29.40 29.60 29.80 30.00
                       85
99 127 140 155 169 183 198
             بطف رااله جنشيب والأرب
TO in 150 2 1 8 0 5 . 120 Mora 0 Maris 0 2 0 8 10 6 : 20 50 : 3 0 2 0 2 0 0 14 0 R 17 15 0 180 200
```

```
Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\
 Data File : 031406 15.D
 Acq On : 16 Mar 2006
Operator : AF
                            1:09 pm
 Sample : 06-061-6 20X
           : 25ML B241
 Misc
 ALS Vial : 9 Sample Multiplier: 1
 Quant Method: C:\MSDCHEM\1\METHODS\T015021805.M
 Ouant Title :
 TIC Library : C:\DATABASE\NIST02.L
 TIC Integration Parameters: lscint.e
                 ************
 Peak Number 7 Cyclohexane, 1,1,3-trimethyl- Concentration Rank 14
   R.T. EstConc
                                        Relative to ISTD
                             Area
                         26.49 7.79 ppbV 11445700 chlorobenzene-d5 26.25
  Hit# of 5 Tentative ID
                                          MW MolForm CAS# Qual
  ______
  1 Cyclohexane, 1,1,3-trimethyl- 126 C9H18 003073-66-3 92 2 Cyclohexane, 1,1,3-trimethyl- 126 C9H18 003073-66-3 91 3 Cyclohexane, 1,1,3-trimethyl- 126 C9H18 003073-66-3 90 4 Cyclohexane, 1,3,5-trimethyl- 126 C9H18 001839-63-0 72 5 Cyclohexane, 1,3,5-trimethyl-, (... 126 C9H18 001795-27-3 72
             Scan 2465 (26.492 min): 031406_15.D (-2460) (-)
                                                         m/z 111.10 100.00%
                              69
     5000
                                                            26.20 26.40 26.60 26.80
                                                          m/z 69.10 61.68%
        10 20 30 40 50 60 70 80 90 100 110 120 130
 Abundance
                   #11239: Cyclohexane, 1,1,3-trimethyl-
                              69
                                                            26.20 26.40 26.60 26.80
                                                          m/z 55.10 27.02%
     5000
                                  83
              62 95 102
         10 20 30 40 50 60 70 80 90 100 110 120 130
 Abundance
                   #11223: Cyclohexane, 1,1,3-trimethyl-
                                                            26.20 26.40 26.60 26.80
                                                          m/z 41.10
                                                                      24.26%
     5000
                                                            26.20 26.40 26.60 26.80
                                                 126
                                                          m/z 83.05
         10 20 30 40 50 60 70 80 90 100 110 120 130
                   #11237: Cyclohexane, 1,1,3-trimethyl-
 Abundance
                                                       26.20 26.40 26.60 26.80
     5000
                                   83
                                 95 103
                  48 62
TOME 02180510M Boon 301a14020501680297016802006 ROOT1110 120 130
```

LSC Area Percent Report

Data Patk: C:\MSDChem\1\DATA\2006_FEB\031506\

Data File : 031406_08.D

3:24 am

Acq On : 16 Mar 2006 Operator : AF : 06-061-7 Sample : 500ML A204 Misc

ALS Vial : 3 Sample Multiplier: 1

Integration Parameters: lscint.e

Integrator: ChemStation

Filtering: 5 Smoothing : OFF

Min Area: 5 % of largest Peak Max Peaks: 100 Sampling : 1

Start Thrs: 0.2 Peak Location: TOP Stop Thrs : 0

If leading or trailing edge < 100 prefer < Baseline drop clsc tangent >

Peak separation: 5

: C:\MSDCHEM\1\METHODS\TO15021805.M Method

Title

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PF T3	K Y	peak height	corr. area	corr. % max.	
						-				
1	15.757	1373	1380	1408	ВВ					
.2	19.413	1743	1749	1763	BV			7807920		
ı i 3	26.269	2436	2442	2470	ВВ			11941747		
	27.093						35756	1218462	10.20%	4.773%

Sum of corrected areas: 25529878

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\2006 FEB\031506\

Data File : 031406 08.D

Acq On : 16 Mar 2006 3:24 am

Operator : AF

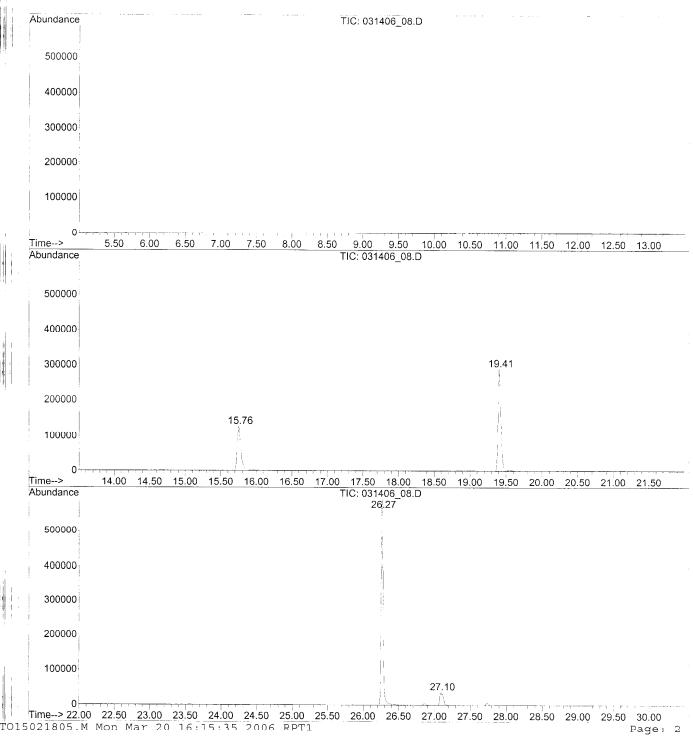
Sample : 06-061-7 Misc : 500ML A204

ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\T015021805.M

Quant Title :

TIC Library : C:\DATABASE\NTST02.L TIC Integration Parameters: lscint.e



Tentativelpradynseared Compound Resortsummary

DBataPBth::CC/MMDDdbmhtlDmmA22006FEBb0035866/

DBataFflee::003496608DD

AAqqOOn ::166MMar20066 33224amm Opperator ::AAF //

Samphee ::066065177 MMscc ::500MMLAA044

06-061-7

AASSVŸāāl ::33 SamppeeMMultippleer:11

QQaantMMehhdd::CC\MMBDHBMM\\MMEHHDB\$\TOO\$6028665MM

QQuantTTtte ::

TTCCLLbbaryy :: CC \ DDARBEENNSSW02LL TTCCImhegganionnPanameters: lscintee

|--Internal Standard---|

TIC Top Hit name RT EstConc Units Response # RT Resp Conc

No Library Search Compounds Detected

3550A QA/QC REPORT

Sample Information

Run Information

Inlet Position: 3

Date: 03-16-06

Injection Number: 1

Analysis Information

Method Name : 14CP_LCI.MTH

Int. Std.: Yes

sample Type : Sample

Cryofocus : Yes

Analysis Type : Low Level

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Sample Dryer not ready!

ENSR

Farwird Air Libboratory, DCE Ayer Firett, Harverd, Massacrotierts, D4-5-T 874,772 J. 344, E 926,772,4986, Www.ressrantom.com



ENSR Air Toxics Specialty Laboratory Analytical Report

Client:

Steve Wright

ENSR

2 Technology Park Drive Westford, MA 01886

Laboratory ID: 06-061 Sulfur

Date(s) Received: 3/9/06

Client ID: 10736-001

All work contained in this report has been done in accordance with laboratory standard operating procedures. ENSR's Air Toxics Specialty Laboratory follows methodologies based upon standard EPA/NIOSH/OSHA Methods. Data contained herein should be considered accurate and complete to the best of our knowledge. This report cannot be duplicated in part without the written permission of ENSR.

Alyson Fortune Project Manager

ENSR Air Toxics Specialty Laboratory

Date



Air Toxics Specialty Laboratory



Case Narrative

Re:

Volatile Organic Analysis of Tedlar Bags by Gas Chromatography/Flame Photometric Detection (GC/FPD) – Crow Landfill

PROJECT #:

10736-001

LAB ID#:

06-061

ANALYTICAL PROCEDURE:

Six (6) Tedlar bag samples were analyzed for project specific reduced sulfur compounds following the guidelines of EPA Method 15, <u>Determination of Hydrogen Sulfide, Carbonyl Sulfide, and Carbon Disulfide Emissions from Stationary Sources</u>, modified.

A Hewlett Packard 5890 Series II gas chromatograph (GC) equipped with a Hewlett Packard flame photometric detector (FPD) was used for the reduced sulfur compound analysis. A 1 mL aliquot of each sample was manually injected onto the head of the chromatographic column for analysis. Five point calibrations were performed for each target compound.

The operating conditions of the GC/FPD are listed in Table 1.

No problems occurred during sample receipt or log-in.

TO-15 results of the associated SUMMA canister samples are submitted under separate cover.

QUALITY CONTROL:

1. A laboratory blank was analyzed daily prior to sample analysis in the same manner as the samples. Target analytes were not detected in the blank.

DISCUSSION:

- 1. Samples [Well EW-1], [Well Flare], and [Well TEW-2] were analyzed initially as various large dilutions due to known values of hydrogen sulfide which would have exceeded the calibrated range of the instrument and caused detector saturation if analyzed undiluted. Detected values and/or reporting limits have been adjusted accordingly.
- 2. The concentration of hydrogen sulfide in samples [Well EW-1], [Well Flare], and [Well TEW-2] exceeded the calibrated range of the instrument. Due to holding time limitations and/or analytical limitations, a further dilution was not performed. Values have been flagged with an "E" and should be considered estimated.
- 3. The compounds sulfur dioxide and carbonyl sulfide co-elute on the GC/FPD system used for this analysis. Therefore, any non-detected values are reported as the sum of the lowest calibration standard concentrations. Any peaks eluting at the retention time of these two compounds were quantified using both calibration curves; thus two values (representing the potential sulfur dioxide or potential carbonyl sulfide concentration) are reported in these cases.



Air Toxics Specialty Laboratory



4. The potential sulfur dioxide concentration in samples [Well EW-1], [Well Flare], and [Well TEW-2] exceeded the calibrated range of the instrument. Due to holding time limitations and/or analytical limitations, a further dilution was not performed. Values have been flagged with an "E" and should be considered estimated.

TABLE 1								
GC/FPD Operating Conditions								
Instrument	Hewlett Packard 5890 Series II GC							
Injector Temperature	210°C							
Column	RTX-1 #118563							
Parameters	60m x 0.53 mm ID; 7 um df							
Carrier gas	UHP Helium; Flow rate = 13 ml/min							
Detector	Flame Photometric Detector; Temperature: 225°C							
Temperature program	Initial Temp.: 32°C Hold 3 minutes							
	Ramp 15°C/min to 150°C for 0.1 minute							
	Range = 3							
Data System	TurboChrom 4.1 software							

Date Analysis Started: 3/9/06

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ENSR AIR TOXICS SPECIALTY LABORATORY SUMMARY OF ANALYTICAL RESULTS

Project: Crow Lane Landfill Laboratory ID #: 06-061

Sample ID Laboratory ID Date Sampled Date Received Date Analyzed Dilution Factor	Well EW-1 06-061-8 3/8/06 3/9/06 3/10/06 10,020		Well Flare 06-061-9 3/8/06 3/9/06 3/10/06 9,900		Well TEW-2 06-061-10 3/8/06 3/9/06 3/10/06 5,200		AMB-1 06-061-11 3/8/06 3/9/06 3/10/06 1.0	
Compound	ppbV		ppbV		ppbV		ppbV	
Hydrogen Sulfide	8,500,000	Ε	41,000,000	E	27,000,000	E	55	U
Carbonyl Sulfide / Sulfur Dioxide **	840,000 / 1,600,00	00 NQ/E	3,500,000 / 4,900,0	000 NQ / E	1,600,000 / 2,500,0	000 NQ / E	83	U
Methyl Mercaptan	550,000	U	540,000	U	290,000	U	55	U
Ethyl mercaptan	750,000	U	740,000	U	390,000	U	75	U
Dimethyl Sulfide	760,000	U	750,000	U	400,000	U	76	U
Isopropyl mercaptan	600,000	U	590,000	U	310,000	U	60	U
t-butyl mercaptan	490,000	U	490,000	U	250,000	U	49	U
Ethyl methyl sulfide	620,000	U	610,000	U	320,000	U	62	U
Dimethyl Disulfide	620,000	U	610,000	U	320,000	U	62	U

Sample ID Laboratory ID Date Sampled Date Received Date Analyzed Dilution Factor	AME 06-06 ⁻ 3/8/0 3/9/0 3/10/ 1.0	1-12 06 06 06	Backgr 06-06 3/8/ 3/9/ 3/10 1.0	1-13 06 06 /06
Compound	ppb	V	ppt	νV
Hydrogen Sulfide	55	U	55	U
Carbonyl Sulfide / Sulfur Dioxide **	83	U	83	U
Methyl Mercaptan	55	U	55	U
Ethyl mercaptan	75	U	75	U
Dimethyl Sulfide	76	U	76	U
Isopropyl mercaptan	60	U	60	U
t-butyl mercaptan	49	U	49	U
Ethyl methyl sulfide	62	U	62	U
Dimethyl Disulfide	62	U	62	U

U = undetected at specified reporting limit

NO - no qualifier (for carbonyl sulfide and/or sulfur dioxide

B = analyte found in blank

** = Co-eluters

 $[\]bar{\mathbb{E}}$ - estimated concentration; value is above the upper limit of calibration

ENSR AIR TOXICS SPECIALTY LABORATORY QUALITY CONTROL RESULTS-BLANKS

Project: Crow Lane Landfill Laboratory ID #: 06-061

Laboratory Blanks							
Sample ID Laboratory ID	Method Blank MB06-061						
Date Analyzed	3/10/06						
Compound		ppbV					
Hydrogen Sulfide	55	U					
Carbonyl Sulfide / Sulfur Dioxide **	83	U					
Methyl Mercaptan	55	U					
Ethyl mercaptan	. 75	U					
Dimethyl Sulfide	76	U					
Isopropyl mercaptan	60	U					
t-butyl mercaptan	49	U					
Ethyl methyl sulfide	62	U					
Dimethyl Disulfide	62	U					

U = undetected at specified reporting limit

E - estimated concentration; value is above the upper limit of calibration

B = analyte found in blank
** = Co-eluters

La www.ensr.com Page of Remarks Analysis Requested RUSH (only pre-approved jobs guaranteed) 3 Sandara 1 7.50 S (ab1D) **Turn-Around Time:** lie, special reporting. Ilmits needed, billing informa Standard 10-day N Che Cury port Notes: Sample Type (Soil gas/ambient Pink: Sampler Chain of Custody Tape No.: Time: [[C] Date **CHAIN OF CUSTODY RECORD** Time; Regulator LD. Date: Date: Location: Email: Yellow: Lab Received for laboratory by: (print name) Field Logbook No.: 12 6500 Canister LD. White: Original (to Lab) Received by: (print name) A SE SE SE VI Received by: (postage) 9 Sample Container (Caurillag) Send Results/Report to: 0 4 4 Signaturé: Signature: Project Name Date: Comp Time: 11 - 4 Grab Date: Time Date: Time: Signature: 1767 COB / 605 R Project Number: 70736-007 ENSR AIT Laboratory
325 Ave Rd
Havard, Max 0.1451-132
Havard, Max 0.1451-132
House, Sylva 2.2345
From Sylva 2.246
George Day 2.2465
George Day 2.2465 DECK CON Sum & BOX WELL FLAME ach Ten 2 Sampler: (Pent Name) HAMIJation Relinquished by: (programe) Relinquished by: (print name) Relinquished by: print name CROW GARKE BACKGROUND Field Sample No./ Identification O SA Signature: Signature

6 of 7

SAMPLE LOG-IN & RECEIPT CHECKLIST

Client/Proj# Coo	Lane C	and fill/10	0736-60	<u> </u>	agaming mining and a graph of the second of		
Project Mgr: Sta	H. Willia	att	La	b Pool #: <u>06</u> -	<u>06</u> L		
			Date & Time: 3/9/06/1145				
Sample Matrix	Number of Samples		Hold Time & Due by(date)	Storage Location	Disposal Date*		
Tedar Bogs	6	suturcomo o e mismal	HT:3/11/06 Due:3/23/06	Galab			
Summa cours		70-15 +		Balms lab			
			HT:				
2) COC present / not3) COC Tape preser4) Samples broken /	nt / not prese	ent on shipping co	ontainer 🛆 /	A			
5) Samples ambient6) Samples preserve	d correctly /	incorrectly / none	e recommended				
7) Received within /8) COC tapes prese	A CONTRACT OF THE PARTY OF THE	- market					
9) Discrepancies / No	O discrepand	cies noted between	en COCs and sai	mples			
Additional Comments:							
*= Note that all Canister samp	les will be consid	lered disposed of during	next cleaning.				

*= Note that all Canister samples will be considered disposed of during next cleaning For canister samples, please refer to Canister Log Book for details.

R:\Air_Tox\LAB\Lab forms\samplog xis Last Revised 5/30/03

www.ensr.com Page of Remarks Analysis Requested RUSH (only pre-approved jobs guaranteed) Notes: (i.e., special reporting limits needed, billing information) Turn-Around Time: Standard 10-day J TAS CHOMPS Sample Type (Soil gas/ambient) Chain of Custody Tape No.: Pink: Sampler Date: Time: / / _ / **CHAIN OF CUSTODY RECORD** Regulator I.D. Location: Date: Time: Time: Date: Email: Yellow: Lab Received for laboratory by: (print name) Canister I.D. Field Logbook No.: 📝 🛴 💮 White: Original (to Lab) K Received by: (print name) Received by: (print name) 1000 Sample Container (Can/Bag) Send Results/Report to: () () () Signature: Signature: Project Name: Comp Time: Grab Date: Time: Date: Time: G25 R Date: Time 700 40000 3 2 ENSR Air Laboratory 325 Ayer Rd Harvard, MA 01451-1132 Phone: (978) 772-2345 Fax: (978) 772-4956 Date Signature: / Co Set 188 Sampler: (Print Name)/(Affiliation) WELL CO Jum Relinquished by: (print name) Relinquished by: (print name) Relinquished by: (print name) のところのがする Field Sample No./ Identification Client: P/20 Ju-Project Number: 8 0 5 E Q I E E Signature: Signature: Signature:

Software Version: 4.1<2F12>

Date: 3/20/2006 04:13 PM

LOML

06-06 |-13

Sample Name :

Data File : C:\TC4\DATA2\CRCW013.RAW

Sequence File: C:\TC4\DATA2\030906.SEQ Instrument

Sample Amount

: HPGC#2 : 1.0000

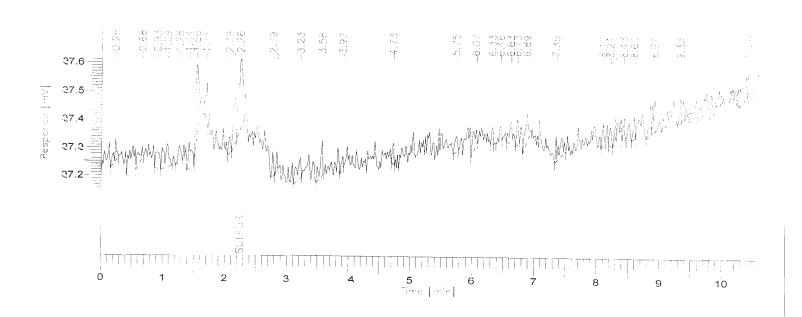
Rack/Vial: 0/0

Date: 3/10/2006 10:23 PM

Cycle: 13 Channel : A

Cperator: afortune

Dilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

Instrument:	======== HPGC#2 ======	======================================	======================================	
	Area BL [µV·s]	Component Name	Conc pphV	
2.26 248.07	1056.83 VB	Sulfur Dioxide	12.38	
248.07	1056.83		-12.38	
========	=======	=======================================	=========	=======================================
Tedlar bags		list TRS		

Software Version: 4.1<2F12> Date: 3/20/2006 06:10 PM

OML 06-061-13

Sample Name

Data File : C:\TC4\DATA2\CROW013.RAW

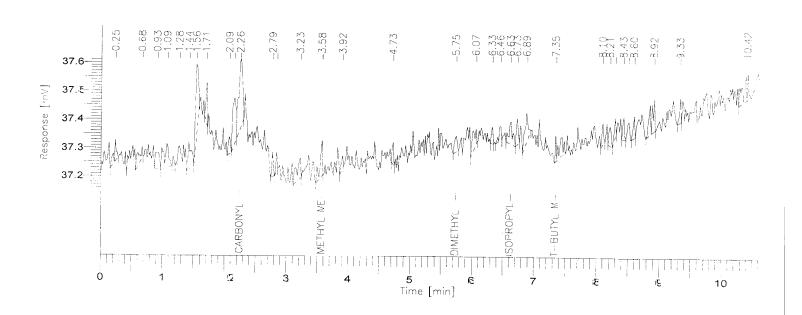
Date: 3/10/2006 10:23 PM

Sequence File: C:\TC4\DATA2\030906.SEQ Rack/Vial: 0/0

Cycle: 13 Channel : A

Instrument : HPGC#2 Sample Amount : 1.0000

Operator: afortune Dilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

Insti	rument =====	: HPGC#2	2 ====	Column: RTX-1	(#118563) =======	Detector: FPD
Time [min]	Weight [uV]	[hA.2]	BL	Component Name	Conc ppbV	
2.26	248.07	1056.#3	VB	Carbonyl sulfide	30.69	ZRL
	248.07	1056.≴3			30.69	
===== [edlar	bags	======= for sho	==== >r:t		========	=======================================

Software Version: 4.1<2F12>

Date: 3/20/2006 04:14 PM

1.0 MC AB "AMB-1"

06-061-11

Sample Name :

Data File : C:\TC4\DATA2\CROW014.RAW

Sequence File: C:\TC4\DATA2\030606.SEQ

Instrument : HPGC#2 Rack/Vial: 0/0

Sample Amount

: 1.0000

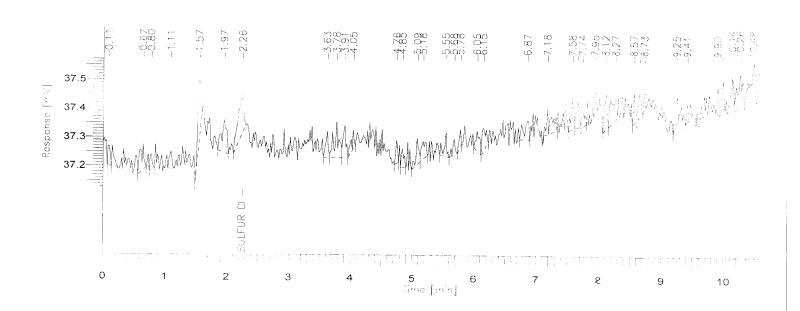
Date: 3/10/2006

)/2006 10:36 PM

Cycle: 14 Channel : A

Operator: afortune

Dilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

Instrument: HPGC#2 | Column: RTX-1 (#118563) | Detector: FPD

No peaks available to report

Tedlar hags for short list TDC

Tedlar bags for short list TRS

AMB-1

CSoftware Version: 4.1<2F12> Date: 3/20/2006 06:11 PM

1,0mc 06-061-11

Sample Name :

Data File : C:\TC4\DATA2\CROW014.RAW

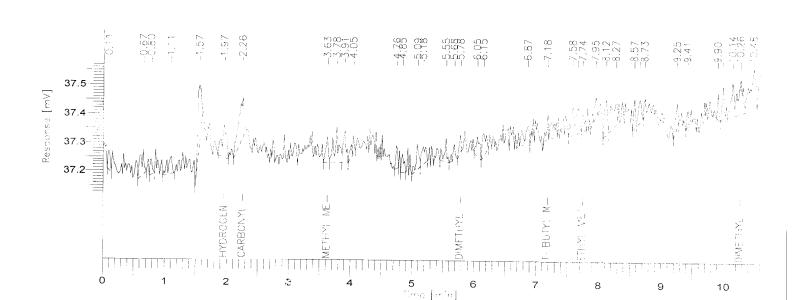
Date: 3/10/2006 10:39 PM

Sequence File: C:\TC4\DATA2\030906.SEQ Instrument

Cycle: 14 Channel: A

: HPGC#2 Rack/Vial: 0/0 Sample Amount : 1.0000

Operator: afortune Dilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

Instrument: HPGC#2 (#118563)No peaks available to report

Tedlar bags for short list TRS

Software Version: 4.1<2F12> 1.0 ML "AMB-2" 06-061-12 2
Date: 3/20/2006 04:15 PM

Sample Name :

Data File : C:\TC4\DATA2\CRCW015.RAW
Sequence File: C:\TC4\DATA2\030906.SEQ

Instrument: HPGC#2 Rack/Vial: 0/0

Sample Amount

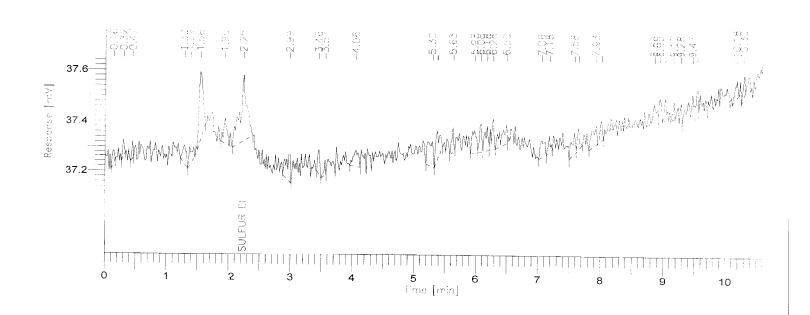
: 1.0000

Date: 3/10/2006 10:54 PM

Cycle: 15 Channel: A

Cperator: afortune

Dilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

Instr	ument:	HPGC#2	Column: RTX-1	(#118563) :=========	Detector: FPD
Time [min]	Height [uV]	Area BL	Component Name	Conc ựựbV	
2.25	260.30	2020.00 BB	Sulfur Dioxide	20.99	
	260.30	2020.00		20.99	
== == [edla	===== r bags	======= for shor	======================================	=======================================	

10 AG AMO - 2

SUHS

C Software Version: 4.1<2F12>

Eate: 3/20/2006 06:12 PM

1.0ml 06-061-12

Sample Name :

Cata File : C:\TC4\CATA2\CRCW015.RAW

\$equence File: C:\TC4\EATA2\030806.\$EQ

Instrument : HPGC#2 Rack/Vial: 0/0

Sample Amount

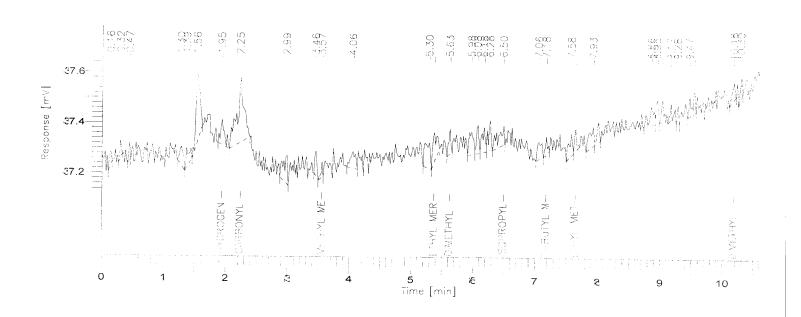
: 1.0000

Tate: 3/10/2006 10:54 PM

Cycle: 15 Channel : A

Cperator: afortune

Eilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

Time Veight			========	=======================================
[m+11] [uv]	Area DL	Component Name	Conc ppbV	
2.25 260.30	2020.00 BB	Carbonyl sulfide	33.40	ZPL
260.30	2020.00		33.40	

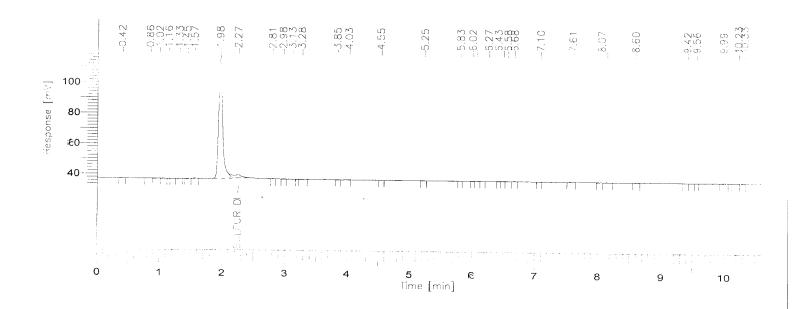
 $\forall \alpha \forall L_{\alpha = \forall L} \quad \zeta \otimes \quad \blacksquare \triangle \quad n \forall \quad \blacksquare \otimes \quad Gdwh = \#625325339 \# \#37 = 48 \#SP$

10,020x0,1

Vdpsoh#Qdph##=#

fle crowoit.

LGdwd#Iloh####=#F=_WF7_GDWD5_FURZ3491UDZ###Gdwh=#624325339##44=44#SP Vhtxhqfh#Iloh=#F=_WF7_GDWD5_363<391VHT###F|foh=#49###Fkdqqho#=#D Lqvwuxphqw###=#KSJF&5###Udfn2Yldo=#323###Rshudwru=#diruwxqh Vdpsoh#Dprxqw####=#413333################Gloxwlrq#Idfwru##=#4133



ENSR Air Toxics Specialty Laboratory

Instrument: HPGC#2 Column: RTX-1 (#118 Time Height Component Conc [min] [uV] [µV·s] Name ppbV 2.27 21409.00 EB Sulfur Dioxide 161.25 2366.90 21409.00 161.25 Tedlar bags for short list TRS

Software Version: 4.1<2F12>

Date: 3/20/2006 06:13 PM

10,020x dil

06-061-8

Sample Name :

Data File : C:\TC4\DATA2\CROW016.RAW

Date: 3/10/2006 11:11 PM

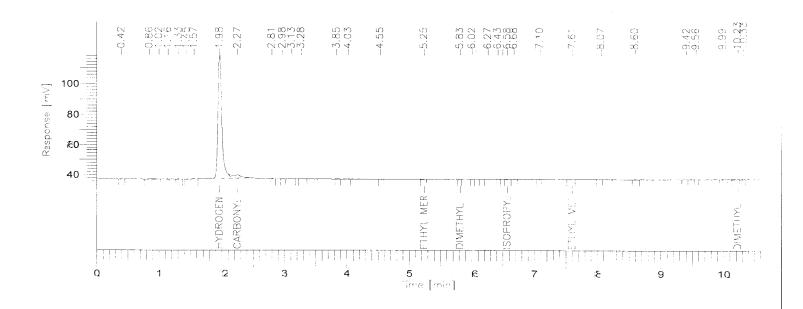
Sequence File: C:\TC4\DATA2\030&06.SEQ

Cycle: 16 Channel : A

: HPGC#2 Rack/Vial: 0/0 Instrument

Operator: afortune

Dilution Factor : 1.00 Sample Amount : 1.0000



ENSR Air Toxics Specialty Laboratory

Instrument: HPGC#2 Column: RTX-1

Time		Area [µV·≴]	ÆL	Component Næme	Conc ppbV	
1.98 2.27		355005.50 21409.00		Yydrogen zulfide Carbonyl zulfide	845.96 83.89	
	85010.56	376414.50			929.85	

Software Version: 4.1<2F12> Date: 3/20/2006 04:17 PM

5200 x dil "TEW-2"

Sample Name :

Data File : C:\TC4\DATAZ\CROW017.RAW

Date: 3/10/2006 11:27 PM

Sequence File: C:\TC4\DATA2\030906.SEQ

Cycle: 17 Channel : A

Instrument : HPGC#2 Rack/Vial: 0/0

Operator: afortune

Sample Amount

: 1.0000

Dilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

=========	========	=======================================	=========	=======================================
Instrument:	HPGC#2	Column: RTX-1	(#118563)	Detector: FPD
========	=========			=======================================
	Area BL	Component Name	Conc ppbV	
2.26 12901.37	160922.00 *EB	Sulfur Dioxide	485.22	
12901.37	160922.00		485.22	
======== Tedlar bags	for short	list TRS		

TEW-2 5200 x die 06-061-10 Software Version: 4.1<2F12> Date: 3/20/2006 06:14 PM

Sample Name :

Data File : C:\TC4\DATA2\CROW017.RAW

Sequence File: C:\TC4\DATA2\030\colon 606.SEQ

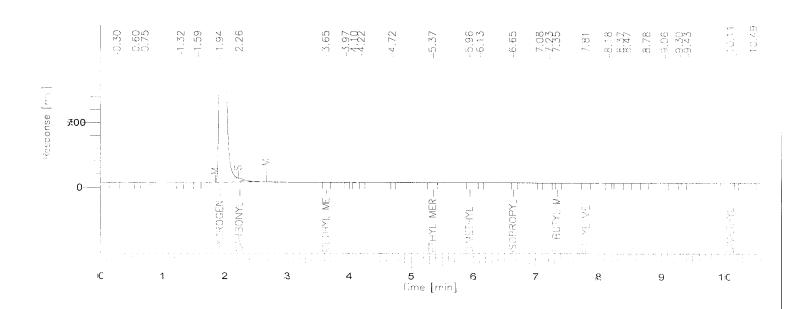
Instrument : HPGC#2 Rack/Vial: 0/0

Sample Amount : 1.0000 Date: 3/10/2006 11:27 PM

Cycle: 17 Channel : A

Operator: afortune

Dilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

Time Height Area BL Component Conc [min] [uV] [uV·s] Name ppbV 1.84 1.01e+06 8285338.50 *BE Hydrogen sulfide 5253.22 2.26 12628.75 144050.00 *EB Carbonyl sulfide 313.82 1.03e+06 6438388.50 5567.04	Instrument	======================================	Column: RTX-1	(#118563)	
2.26 1262 £.75 144050.00 *EB Carbonyl sulfide 313.82	,		-		
1.03e+06					
	1.03e+0	6		5567.04	

Tedlar bags for short list TRS

Software Version: 4.1<2F12> 9900 xdul "Flare" Date: 3/20/2006 04:17 PM

Sample Name :

Data File : C:\TC4\DATA2\CROW018.RAW Date: 3/10/2006 11:46 PM

Sequence File: C:\TC4\DATA2\030906.SEQ

Cycle: 18 Channel : A Operator: afortune

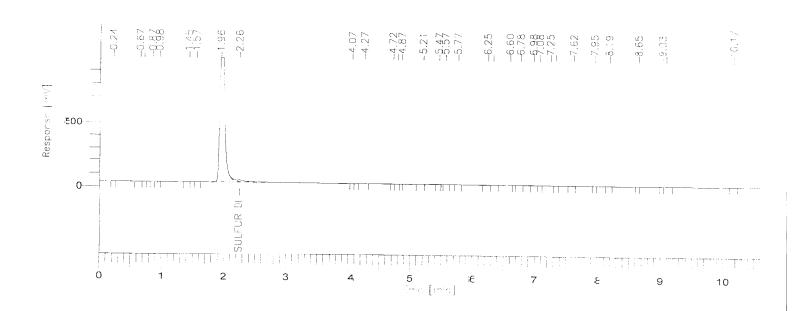
Instrument : HPGC#2

Rack/Vial: 0/0

Sample Amount

: 1.0000

Dilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

<pre>Instrument:</pre>	HPGC#2	Column: RTX-1	 (#118563) 	Detector: FPD
Time Height [min] [uV]	Area BL	Component Name	Conc ppbV	
2.26 14587.35	169425.00 EB	Sulfur Dioxide	498.44	
14587.35	169425.00		498.44	
=======	=======================================	=======================================	=======================================	=======================================
Tedlar bags	for short	list TRS		
=========	========	=======================================	=========	

= Software Version: 4.1<2F12>

Tate: 3/20/2006 06:15 PM

9900x &1

Sample Name :

Lata File : C:\TC4\EATA2\CROW018.RAW

Date: 3/10/2006 11:46 PM

Sequence File: C:\TC4\TATA2\030806.SEQ

Cycle: 18 Channel: A

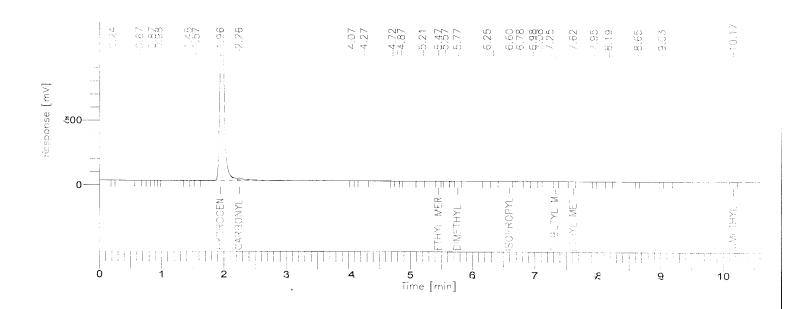
Instrument : HPGC #2 Rack/Vial: 0/0

Operator: afortune

Sample Amount

: 1.0000

Lilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

Instrument: HPGC #2 Column: RTX-1 (4118563)

Time [min]	Yeight [uV]	Area [µV·s]	BL	Component Name	Conc ppbV	
		5885747.50 169425.00		Yydrogen sulfide Carbonyl sulfide	4127.41 351.36	
	1.04e+06	6055172.50			4478.77	

Tedlar bags for short list TRS